BRITISH STANDARD

BS ISO/IEC 24709-2:2007

Information technology — Conformance testing for the biometric application programming interface (BioAPI) —

Part 2: Test assertions for biometric service providers

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National foreword

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A list of organizations represented on IST/44 can be obtained on request to its secretary.

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Information technology — Conformance testing for the biometric application programming interface (BioAPI) —

Part 2: Test assertions for biometric service providers

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 24709-2 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 37, *Biometrics*.

ISO/IEC 24709 consists of the following parts, under the general title *Information technology — Conformance testing for the biometric application programming interface (BioAPI)*:

— *Part 1: Methods and procedures*

— *Part 2: Test assertions for biometric service providers*

The following parts are under preparation:

— *Part 3: Test assertions for BioAPI frameworks*

— *Part 4: Test assertions for biometric applications*

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Introduction

This part of ISO/IEC 24709 defines a number of test assertions written in the assertion language specified in ISO/IEC 24709-1. These assertions enable a user of this part of ISO/IEC 24709 (such as a testing laboratory) to test the conformance to ISO/IEC 19784-1 (BioAPI 2.0) of any biometric service provider (BSP) that claims to be a conforming implementation of that International Standard.

The organization of the test assertions in this part of ISO/IEC 24709 reflects the structure of Annex A of ISO/IEC 19784-1:2006, which specifies conformance to BioAPI for various types of implementations (BSPs, frameworks, and applications) and for BSPs belonging to several conformance subclasses.

This part of ISO/IEC 24709 contains test assertions for testing conformance of BSPs of all conformance subclasses. The assertions are further organized according to conformance subclasses (if any) and claimed support of optional features.

Each test assertion exercises one or more (possibly elementary) features of an implementation under test. Assertions are placed into packages (one or more assertions per package) as required by the assertion language.

Clause 6 specifies general principles.

Clause 7 lists test assertions to be used in the conformance testing model for BioAPI BSPs, with specific provisions as follows:

Clause 7.1 contains descriptions of the BioAPI Conformity Statement and the test assertions.

Clause 7.2 contains specific provisions for BSPs of subclass "Verification BSP".

Clause 7.3 contains specific provisions for BSPs of subclass "Identification BSP".

Clause 7.4 contains specific provisions for BSPs of subclass "Capture BSP".

Clause 7.5 contains specific provisions for BSPs of subclass "Verification Engine".

Clause 7.6 contains specific provisions for BSPs of subclass "Identification Engine".

Clause 8 specifies the assertions to be used in the conformance testing model for BioAPI BSPs, for all conformance subclasses of BSPs (see ISO/IEC 19784-1:2006, A.4).

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Information technology — Conformance testing for the biometric application programming interface (BioAPI) —

Part 2:
Test assertions for biometric service providers

1 Scope

This part of ISO/IEC 24709 defines a number of test assertions written in the assertion language specified in ISO/IEC 24709-1.

This part of ISO/IEC 24709 specifies what subset of all the test assertions defined herein are to be executed for each of the five conformance subclasses of BSPs defined in ISO/IEC 19784-1 (BioAPI 2.0). It also specifies additional assertions that are to be executed depending on the optional features of BioAPI 2.0 that the implementation under test claims to support.

Test assertions specified in this part of ISO/IEC 24709 are not claimed to be exhaustive (see also ISO/IEC 24709-1:2007, Clause 6). Biometric service provider implementations that are tested according to the methodology specified in ISO/IEC 24709-1 and with the test assertions specified in this part of ISO/IEC 24709 can (only) claim conformance to those aspects of ISO/IEC 19784-1 that are covered by these test assertions.

2 Conformance

Implementations (BioAPI conformance test suites) claiming conformance to this part of ISO/IEC 24709 shall be able to process all the test assertions specified in Clause 8 according to the methodology specified in ISO/IEC 24709-1 and the general principles and provisions specified in Clauses 6 and 7.

3 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 19784-1:2006, *Information technology — Biometric application programming interface — Part 1: BioAPI specification*

ISO/IEC 24709-1:2007, *Information technology — Conformance testing for the biometric application programming interface (BioAPI) — Part 1: Methods and procedures*

4 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 24709-1 apply.

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5 Symbols and abbreviated terms

For the purposes of this document, the symbols and abbreviated terms defined in ISO/IEC 24709-1 apply.

6 General principles

6.1 The test assertions listed in Clause 7 and specified in Clause 8 are based on the conformance testing methodology specified in ISO/IEC 24709-1, and can only be used in the context of that methodology. The assertions are written in the assertion language specified in ISO/IEC 24709-1, which is part of that methodology.

6.2 An important concept of the conformance testing methodology specified in ISO/IEC 24709-1 is the existence of three conformance testing models (see ISO/IEC 24709-1:2007, Clause 6):

a) the conformance testing model for BioAPI applications;

b) the conformance testing model for BioAPI frameworks; and

c) the conformance testing model for BioAPI BSPs.

6.3 Each testing model is concerned with testing one of the three standard components of the BioAPI architecture (see ISO/IEC 24709-1:2007, Clause 6). Clause 8 of this Part of ISO/IEC 24709 specifies a number of test assertions for the conformance testing model for BioAPI BSPs. This part of ISO/IEC 24709 is not concerned with the conformance testing models for BioAPI applications and frameworks and corresponding test assertions.

7 Testing the conformance of BioAPI BSPs

7.1 General

7.1.1 For conformance testing of a BioAPI BSP, a BioAPI Conformity Statement, as defined in ISO/IEC 24709-1:2007, Clause 6.1, shall be produced by the vendor of the BSP and shall consist of the following information:

Table 1 — BioAPI Conformity Statement

Vendor contact information:	
Name	
Address:	
Street	
City	
State or province	
Zip code or postal code	
Country	
Telephone	

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Biometric product:	
Name	
Serial number	
Description	
BioAPI conformance class (one of the following):	
BioAPI application	
BioAPI framework	
BSP (this alternative shall be selected)	X
Conformance subclass of the BSP (one of the following):	
verification BSP	
identification BSP	
capture BSP	
verification engine	
identification engine	
Optional functions supported by the BSP (zero or more of the following):	
BioSPI_Capture	
BioSPI_CreateTemplate	
BioSPI_Process	
BioSPI_VerifyMatch	
BioSPI_Enroll	
BioSPI_Verify	
BioSPI_Identify	
Optional features supported by the BSP (zero or more of the following):	
BSP-controlled database	
template adaptation	
generation of SOURCE PRESENT events	
setting of the Quality field in an intermediate BIR	
setting of the Quality field in a processed BIR	
Additional information:	
UUID of the BSP	
BioAPI specification version	
Product version	
Supported BDB formats (one or more format owner / format type pairs)	
Supported biometric types (one or more)	
Maximum supported size for the payload	

7.1.2 The following table lists test assertions that shall be used to determine whether the implementation under test (a BioAPI BSP) fails to satisfy the requirements specified in ISO/IEC 19784-1:2006, A.4.

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NOTE Successful processing of all applicable test assertions is prima facie evidence that the implementation satisfies the applicable requirements of ISO/IEC 19784-1, but does not establish this, as the assertions are not (and cannot be) an exhaustive test of conformance (see also ISO/IEC 24709-1:2007, Clause 6).

7.1.3 These assertions use the conformance testing model for BioAPI BSPs (see ISO 24709-1:2007, Clause 6), and are specified in Clause 8 of this Part of ISO/IEC 24709.

7.1.4 The following subclauses 7.2 to 7.6 contain specific provisions for each conformance subclass of BSP, and specify which of the test assertions specified below to be processed in order to perform conformance testing of a BSP of a given subclass.

Table 2 — Test assertions for BioAPI BSP

Number	Assertion name	References	Purpose
1a	*BioSPI_BSPLoad_InvalidUUID*	**9.3.1.1, 11.2.3**	Verify if calling the function BioSPI_BSPLoad with an invalid input parameter UUID returns BioAPIERR_H_FRAMEWORK_INVALID_UUID.
1b	*BioSPI_BSPLoad_ValidParam*	**9.3.1.1, A.4**	Verify if calling BioSPI_BSPLoad with valid input parameters returns BioAPI_OK.
2a	*BioSPI_BSPUnload_ValidParam*	**9.3.1.2, A.4**	Verify if calling BioSPI_BSPUnload with valid input parameters returns BioAPI_OK.
2b	*BioSPI_BSPUnload_InvalidUUID*	**9.3.1.2, 11.2.3**	Verify if calling BioSPI_BSPUnload with an invalid input parameter UUID returns BioAPIERR_INVALID_UUID.
2c	*BioSPI_BSPUnload_UnmatchedLoad*	**9.3.1.2, 8.1.6.1**	Verify if calling BioSPI_BSPUnload without a matching call to BioSPI_BSPLoad returns BioAPIERR_BSP_NOT_LOADED.
2d	*BioSPI_BSPUnload_Confirm*	**9.3.1.2**	Verify if calling BioSPI_BSPUnload truly unloads the BSP.

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3a	*BioSPI_BSPAttach_ValidParam*	**9.3.1.3, A.4**	Verify if a call to the function BioSPI_BSPAttach with valid input parameters returns BioAPI_OK.
3b	*BioSPI_BSPAttach_InvalidUUID*	**9.3.1.3, 11.2.3**	Verify if a call to the function BioSPI_BSPAttach returns BioAPIERR_INVALID_UUID when the input UUID is invalid.
3c	*BioSPI_BSPAttach_InvalidVersion*	**9.3.1.3, 11.2.3**	Verify if a call to the function BioSPI_BSPAttach returns BioAPIERR_INCOMPATIBLE_VERSION when the caller specifies an incompatible version.
3d	*BioSPI_BSPAttach_InvalidBSPHandle*	**9.3.1.3**	Verify if the function BioSPI_BSPAttach returns an error when called with an invalid BSP handle.
4a	*BioSPI_BSPDetach_ValidParam*	**9.3.1.4, A.4**	Verify if a call to the function BioSPI_BSPDetach with a valid module handle returns BioAPI_OK.
4b	*BioSPI_BSPDetach_InvalidBSPHandle*	**9.3.1.4, 8.1.8.1**	Verify if a call to BioSPI_BSPDetach with an invalid module handle returns an error.
4c	*BioSPI_BSPDetach_Confirm*	**9.3.1.4, 8.1.8.4**	Verify if a call to the function BioSPI_BSPDetach truly terminates the attach session.
5a	*BioSPI_FreeBIRHandle_ValidParam*	**9.3.2.1, 8.2.1, A.4**	Verify if calling the function BioSPI_FreeBIRHandle with a valid BIR handle frees the BIR handle.
5b	*BioSPI_FreeBIRHandle_InvalidBSPHandle*	**9.3.2.1, 8.2.1**	Verify if calling BioSPI_FreeBIRHandle with an invalid BSP handle returns an error.
5c	*BioSPI_FreeBIRHandle_InvalidBIRHandle*	**9.3.2.1, 8.2.1**	Verify if calling BioSPI_FreeBIRHandle with an invalid BIR handle returns an error.

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6a	*BioSPI_GetBIRFromHandle_ValidParam*	**9.3.2.2, 8.2.2, A.4**	Verify if calling BioSPI_GetBIRFromHandle with valid parameters returns BioAPI_OK.
6b	*BioSPI_GetBIRFromHandle_InvalidBSPHandle*	**9.3.2.2, 8.2.2**	Verify if calling BioSPI_GetBIRFromHandle with an invalid BSP handle returns an error.
6c	*BioSPI_GetBIRFromHandle_InvalidBIRHandle*	**9.3.2.2, 8.2.2**	Verify if calling the function BioSPI_GetBIRFromHandle with an invalid BIR handle returns an error.
7a	*BioSPI_GetHeaderFromHandle_ValidParam*	**9.3.2.3, 8.2.3, A.4**	Verify if a call to the function BioSPI_GetHeaderFromHandle with valid input parameters returns BioAPI_OK.
7b	*BioSPI_GetHeaderFromHandle_InvalidBSPHandle*	**9.3.2.3, 8.2.3**	Verify if invoking the function BioSPI_GetHeaderFromHandle with an invalid module handle returns an error.
7c	*BioSPI_GetHeaderFromHandle_InvalidBIRHandle*	**9.3.2.3, 8.2.3**	Verify if a call to the function BioSPI_GetHeaderFromHandle with an invalid BIR handle returns an error.
7d	*BioSPI_GetHeaderFromHandle_BIRHandleNotFreed*	**9.3.2.3, 8.2.3**	Verify that after a call to the function BioSPI_GetHeaderFromHandle, the BIR handle has not been freed.
8a	*BioSPI_EnableEvents_ValidParam*	**9.3.3.1, 8.3.1**	Verify BioSPI_EnableEvents with valid input parameters.
8b	*BioSPI_EnableEvents_InvalidBSPHandle*	**9.3.3.1, 8.3.1**	Verify BioSPI_EnableEvents with an invalid module handle.

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9a	*BioSPI_Capture_AuditData*	**9.3.4.1, 8.4.1.1, 7.47, A.4.6.2.1**	Verify the function BioSPI_Capture with AuditData having a non-NULL value.
9b	*BioSPI_Capture_ReturnQuality*	**9.3.4.1, 8.4.1, 7.49, 7.47, A.4.6.2.2**	Verify if the header of the captured BIR contains a valid quality value (in the range 0-100).
9c	*BioSPI_Capture_ IntermediateProcessedBIR*	**9.3.4.1, 8.4.1.1, 8.4.1.2**	Verify if the BIR returned by the function BioSPI_Capture has a processed level of either INTERMEDIATE or PROCESSED.
9d	*BioSPI_Capture_InvalidBSPHandle*	**9.3.4.1, 8.4.1.2**	Verify if calling BioSPI_Capture with an invalid BSP handle returns an error BioAPIERR_INVALID_BSP_HAN DLE.
10a	*BioSPI_CreateTemplate_PayloadSupported*	**9.3.4.2, 8.4.5.1, 7.47, A.4.6.2.6**	Verify BioSPI_CreateTemplate with valid parameters and payload.
10b	*BioSPI_CreateTemplate_BIRHeaderQuality*	**9.3.4.2, 7.49.3, 7.47, A.4.6.2.2**	Verify the function BioSPI_CreateTemplate with valid parameters and the returned quality value.
10c	*BioSPI_CreateTemplate_OutputBIRDataType*	**9.3.4.2, 8.4.2.1**	Verify BioSPI_CreateTemplate with valid parameters. The new template BIR is expected to have the processed level PROCESSED.
10d	*BioSPI_CreateTemplate_OutputBIRPurpose*	**9.3.4.2, 8.4.2.1**	Verify if the purpose of the created template is the same as the purpose of the captured BIR.
10e	*BioSPI_CreateTemplate_InputBIRDataType*	**9.3.4.2, 8.4.2.1**	Verify BioSPI_CreateTemplate with an input BIR that has an invalid processed level.
10f	*BioSPI_CreateTemplate_Inconsistent_Purpose*	**9.3.4.2, 8.4.2.1**	Verify function BioSPI_CreateTemplate with an invalid input BIR purpose.

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11a	*BioSPI_Process_ValidParam*	**9.3.4.3, 8.4.3.1**	Verify BioSPI_Process with valid parameters and the returned processed level.
11b	*BioSPI_Process_BIRHeaderQuality*	**9.3.4.3, 8.4.3.1, 7.49.3, 7.47, A.4.6.2.2**	Verify BioSPI_Process with valid parameters and if the returned quality is valid.
11c	*BioSPI_Process_OutputBIRPurpose*	**9.3.4.3, 8.4.3.1, 7.12.3**	Verify BioSPI_Process with valid parameters and if the purpose of the processed BIR is the same as the purpose of the captured BIR.
11d	*BioSPI_Process_BuildsProcessedBIR*	**9.3.4.3, 8.4.3.1**	Verify BioSPI_Process with valid parameters and the returned processed level.
11e	*BioSPI_Process_InputBIRDataType*	**9.3.4.3, 8.4.3.1**	Verify BioSPI_Process with an input BIR having a processed level of PROCESSED and if the BioSPI_Process call fails.
12a	*BioSPI_VerifyMatch_ValidParam*	**9.3.4.5, 8.4.5.1**	Verify if calling BioSPI_VerifyMatch with valid input parameters returns BioAPI_OK.
12b	*BioSPI_VerifyMatch_Payload*	**9.3.4.5, 8.4.5.1, 7.47**	Verify the support of payload in the function BioSPI_VerifyMatch. The function is expected to return BioAPI_OK.
12c	*BioSPI_VerifyMatch_ Inconsistent_Purpose*	**9.3.4.5, 8.4.5.1, 11.2.3**	Verify BioSPI_VerifyMatch with a BIR whose purpose is invalid for the function. The function is expected to return BioAPIERR_BSP_INCONSISTENT_PURPOSE.

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13a	*BioSPI_Enroll_ValidParam*	**9.3.4.7, 8.4.7.1, A.4**	Verify if calling BioSPI_Enroll with valid input parameters returns BioAPI_OK.
13b	*BioSPI_Enroll_Payload*	**9.3.4.7, 8.4.7.1, A.4.6.2.6, 7.47**	Verify if calling BioSPI_Enroll with a payload returns BioAPI_OK.
13c	*BioSPI_Enroll_AuditData*	**9.3.4.7, 8.4.7.1, 7.47, A.4.6.2.1**	Verify BioSPI_Enroll with a non-NULL AuditData parameter. The function is expected to return audit data if the BSP supports audit data.
13d	*BioSPI_Enroll_BIRHeaderQuality*	**9.3.4.7, 8.4.7.1, 7.49.3, 7.47, A.4.6.2.2**	Verify if calling the function BioSPI_Enroll returns a valid quality value in the new template BIR's header.
14a	*BioSPI_Verify_ValidParam*	**9.3.4.8, 8.4.8.1, A.4**	Verify if calling the function BioSPI_Verify with valid input parameters returns BioAPI_OK.
14b	*BioSPI_Verify_Payload*	**9.3.4.8, 8.4.8.1, 7.47, A.4.6.2.6**	Verify if calling the function BioSPI_Verify with a payload returns BioAPI_OK.
14c	*BioSPI_Verify_AuditData*	**9.3.4.8, 8.4.8.1, 7.47, A.4.6.2.1**	Verify if calling BioSPI_Verify with audit data returns BioAPI_OK.
15a	*BioSPI_DbOpen_ValidParam*	**9.3.5.1, 8.5.1.1**	Verify BioSPI_DbOpen with valid input parameters
15b	*BioSPI_DbOpen_InvalidBSPHandle*	**9.3.5.1, 8.5.1.1**	Verify BioSPI_DbOpen with an invalid BSP handle
16a	*BioSPI_DbClose_ValidParam*	**9.3.5.2, 8.5.2.1**	Verify BioSPI_DbClose with valid input parameters
16b	*BioSPI_DbClose_InvalidBSPHandle*	**9.3.5.2, 8.5.2.1**	Verify BioSPI_DbClose with an invalid BSP handle

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17a	*BioSPI_DbCreate_DbProtected*	**9.3.5.3, 8.5.3.1**	Invoke BioSPI_DbCreate twicw, and verify if the second invocation results in returning error code BioAPIERR_DATABASE_ALREADY_EXISTS.
17b	*BioSPI_DbCreate_ValidParam*	**9.3.5.3, 8.5.3.1**	Verify BioSPI_DbCreate with valid input parameters
17c	*BioSPI_DbCreate_InvalidBSPHandle*	**9.3.5.3, 8.5.3.1**	Verify BioSPI_DbCreate with invalid BSP handle
18a	*BioSPI_DbDelete_InvalidBSPHandle*	**9.3.5.4, 8.5.4.1**	Verify BioSPI_DbDelete with an invalid BSP handle
18b	*BioSPI_DbDelete_OpenDbProtected*	**9.3.5.4, 8.5.4.1**	Verify BioSPI_DbDelete when the database is open
18c	*BioSPI_DbDelete_ValidParam*	**9.3.5.4, 8.5.4.1**	Verify BioSPI_DbDelete with valid input parameters
19a	*BioSPI_DbSetMarker_ValidParam*	**9.3.5.5, 8.5.5.1**	Verify BioSPI_DbSetMarker with valid input parameters
19b	*BioSPI_DbSetMarker_InvalidBSPHandle*	**9.3.5.5, 8.5.5.1**	Verify BioSPI_DbSetMarker with invalid BSP handle
19c	*BioSPI_DbSetMarker_RecordNotFound*	**9.3.5.5, 8.5.5.1**	Verify BioSPI_DbSetMarker with a keyvalue that does not exist in the database
20a	*BioSPI_DbFreeMarker_ValidParam*	**9.3.5.6, 8.5.6.1**	Verify BioSPI_DbFreeMarker with valid input parameters
20b	*BioSPI_DbFreeMarker_InvalidBSPHandle*	**9.3.5.6, 8.5.6.1**	Verify BioSPI_DbFreeMarker with an invalid BSP handle
20c	*BioSPI_DbFreeMarker_InvalidMarker*	**9.3.5.6, 8.5.6.1**	Verify BioSPI_DbFreeMarker with invalid marker handle
21a	*BioSPI_DbStoreBIR_ValidParam*	**9.3.5.7, 8.5.7.1**	Verify BioSPI_DbStoreBIR with valid input parameters
21b	*BioSPI_DbStoreBIR_InvalidBSPHandle*	**9.3.5.7, 8.5.7.1**	Verify BioSPI_DbStoreBIR with invalid BSP handle
22a	*BioSPI_DbGetBIR_ValidParam*	**9.3.5.8, 8.5.8.1**	Verify BioSPI_DbGetBIR with valid input parameters
22b	*BioSPI_DbGetBIR_InvalidBSPHandle*	**9.3.5.8, 8.5.8.1**	Verify BioSPI_DbGetBIR with invalid BSP handle
22c	*BioSPI_DbGetBIR_RecordNotFound*	**9.3.5.8, 8.5.8.1**	Verify BioSPI_DbGetBIR with a key value that does not exist in the database

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23a	*BioSPI_DbGetNextBIR_ValidParam*	**9.3.5.9, 8.5.9.1**	Verify BioSPI_DbGetNextBIR with valid input parameters
23b	*BioSPI_DbGetNextBIR_InvalidBSPHandle*	**9.3.5.9, 8.5.9.1**	Verify BioSPI_DbGetNextBIR with invalid BSP handle
24a	*BioSPI_DbDeleteBIR_ValidParam*	**9.3.5.10, 8.5.10.1**	Verify BioSPI_DbDeleteBIR with valid parameters
24b	*BioSPI_DbDeleteBIR_InvalidBSPHandle*	**9.3.5.10, 8.5.10.1**	Verify BioSPI_DbDeleteBIR with an invalid BSP handle

7.2 Testing BSPs of subclass "Verification BSP"

7.2.1 The following subclauses specify which test assertions shall be used to determine whether a BSP of the conformance category "Verification BSP" satisfies the requirements specified in ISO/IEC 19784-1:2006, A.4 and A.4.1.

7.2.2 All verification BSPs shall be tested by executing all of the following assertions (in order):

Table 3 — Assertions for Testing Verification BSP

Number	Assertion name	Package
1a	*BioSPI_BSPLoad_InvalidUUID*	020e90c8-0c19-1085-ab54-0002a5d5fd2e
1b	*BioSPI_BSPLoad_ValidParam*	01f6c6f0-0c19-1085-97fe-0002a5d5fd2e
2a	*BioSPI_BSPUnload_ValidParam*	01661010-0c22-1085-8688-0002a5d5fd2e
2b	*BioSPI_BSPUnload_InvalidUUID*	01c2e5b0-0c3b-1085-b31d-0002a5d5fd2e
2c	*BioSPI_BSPUnload_UnmatchedLoad*	02f6c618-0c23-1085-ba89-0002a5d5fd2e
2d	*BioSPI_BSPUnload_Confirm*	03daf040-0c3b-1085-a9fd-0002a5d5fd2e
3a	*BioSPI_BSPAttach_ValidParam*	00ae6488-0c3d-1085-9912-0002a5d5fd2e
3b	*BioSPI_BSPAttach_InvalidUUID*	049cc170-0c5f-1085-981f-0002a5d5fd2e
3c	*BioSPI_BSPAttach_InvalidVersion*	0052ac10-0c60-1085-9883-0002a5d5fd2e
3d	*BioSPI_BSPAttach_InvalidBSPHandle*	03826830-0c57-1085-bfb0-0002a5d5fd2e
4a	*BioSPI_BSPDetach_ValidParam*	00e0d2b0-0c7a-1085-b8ac-0002a5d5fd2e
4b	*BioSPI_BSPDetach_InvalidBSPHandle*	0434c458-0c79-1085-9f2c-0002a5d5fd2e
4c	*BioSPI_BSPDetach_Confirm*	002e7e58-0c78-1085-9e1d-0002a5d5fd2e
5a	*BioSPI_FreeBIRHandle_ValidParam*	0280a7d0-0c80-1085-a9a0-0002a5d5fd2e
5b	*BioSPI_FreeBIRHandle_InvalidBSPHandle*	047aed48-0c80-1085-898b-0002a5d5fd2e
5c	*BioSPI_FreeBIRHandle_InvalidBIRHandle*	018e6c18-0c9c-1085-afdf-0002a5d5fd2e

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6a	*BioSPI_GetBIRFromHandle_ValidParam*	0460b658-0cb4-1085-a304-0002a5d5fd2e
6b	*BioSPI_GetBIRFromHandle_ InvalidBSPHandle*	02445668-0cc5-1085-a3ac-0002a5d5fd2e
6c	*BioSPI_GetBIRFromHandle_ InvalidBIRHandle*	0194a9c0-0cc7-1085-8780-0002a5d5fd2e
7a	*BioSPI_GetHeaderFromHandle_ ValidParam*	027a7db0-0cc7-1085-9391-0002a5d5fd2e
7b	*BioSPI_GetHeaderFromHandle_ InvalidBSPHandle*	057e0d38-0ccd-1085-83b8-0002a5d5fd2e
7c	*BioSPI_GetHeaderFromHandle_ InvalidBIRHandle*	02195e68-0cce-1085-a46f-0002a5d5fd2e
7d	*BioSPI_GetHeaderFromHandle_ BIRHandleNotFreed*	01cc0988-0ccf-1085-a367-0002a5d5fd2e
8a	*BioSPI_EnableEvents_ValidParam*	0333f628-0ccf-1085-aceb-0002a5d5fd2e
8b	*BioSPI_EnableEvents_InvalidBSPHandle*	04ed0838-0ccf-1085-b64e-0002a5d5fd2e
13a	*BioSPI_Enroll_ ValidParam*	0b5ebb60-eefb-11d9-990c-0002a5d5c51b
13b	*BioSPI_Enroll_Payload*	e8969d40-ef05-11d9-9098-0002a5d5c51b
13c	*BioSPI_Enroll_AuditData*	b40a5260-ef14-11d9-a4fe-0002a5d5c51b
13d	*BioSPI_Enroll_BIRHeaderQuality*	6f727320-ef1a-11d9-9143-0002a5d5c51b
14a	*BioSPI_Verify_ ValidParam*	b78e5be0-efcb-11d9-b2c7-0002a5d5c51b
14b	*BioSPI_Verify_Payload*	32969ec0-eff8-11d9-9831-0002a5d5c51b
14c	*BioSPI_Verify_AuditData*	89719700-f218-11d9-b028-0002a5d5c51b

7.2.3 If an implementation claims to support the function *BioSPI_Capture*, the implementation shall be tested by executing all of the following assertions (in order):

Table 4 — Assertions for Testing Verification BSP - BioSPI_Capture

Number	Assertion name	Package
9a	*BioSPI_Capture_AuditData*	02704c50-0cd8-1085-96cb-0002a5d5fd2e
9b	*BioSPI_Capture_ReturnQuality*	03f601f0-0cd8-1085-bd59-0002a5d5fd2e
9c	*BioSPI_Capture_ IntermediateProcessedBIR*	055ddb08-0cd6-1085-a6d3-0002a5d5fd2e
9d	*BioSPI_Capture_InvalidBSPHandle*	0244f2a8-0cf2-1085-8443-0002a5d5fd2e

7.2.4 If an implementation claims to support the function *BioSPI_CreateTemplate*, the implementation shall be tested by executing all of the following assertions (in order):

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Table 5 — Assertions for Testing Verification BSP - BioSPI_CreateTemplate

Number	Assertion name	Package
10a	*BioSPI_CreateTemplate_PayloadSupported*	04a01118-0cf9-1085-96d4-0002a5d5fd2e
10b	*BioSPI_CreateTemplate_ BIRHeaderQuality*	00b5c728-0cfb-1085-8969-0002a5d5fd2e
10c	*BioSPI_CreateTemplate_ OutputBIRDataType*	0193c730-0cf9-1085-b0a3-0002a5d5fd2e
10d	*BioSPI_CreateTemplate_ OutputBIRPurpose*	03dbdaa0-0cf2-1085-99ed-0002a5d5fd2e
10e	*BioSPI_CreateTemplate_ InputBIRDataType*	6d543ea0-2ce9-11d9-9669-0800200c9a66
10f	*BioSPI_CreateTemplate_ Inconsistent_Purpose*	28ec1620-e995-11d9-b1d1-0002a5d5c51b

7.2.5 If an implementation claims to support the function *BioSPI_Process*, the implementation shall be tested by executing all of the following assertions (in order):

Table 6 — Assertions for Testing Verification BSP - BioSPI_Process

Number	Assertion name	Package
11a	*BioSPI_Process_ValidParam*	4ec34700-e9a0-11d9-8fc8-0002a5d5c51b
11b	*BioSPI_Process_BIRHeaderQuality*	211668e0-e9a6-11d9-bcc8-0002a5d5c51b
11c	*BioSPI_Process_OutputBIRPurpose*	e1bb4f20-ed61-11d9-9344-0002a5d5c51b
11d	*BioSPI_Process_BuildsProcessedBIR*	f2ce6540-ed66-11d9-9618-0002a5d5c51b
11e	*BioSPI_Process_InputBIRDataType*	3cf96080-ed6b-11d9-9acf-0002a5d5c51b

7.2.6 If an implementation claims to support the function BioSPI_VerifyMatch, the implementation shall be tested by executing all of the following assertions (in order):

Table 7 — Assertions for Testing Verification BSP - BioSPI_VerifyMatch

Number	Assertion name	Package
12a	*BioSPI_VerifyMatch_ValidParam*	688aad60-ee30-11d9-a62c-0002a5d5c51b
12b	*BioSPI_VerifyMatch_Payload*	692ebe20-ee47-11d9-bd34-0002a5d5c51b
12c	*BioSPI_VerifyMatch_ Inconsistent_Purpose*	9108ec70-2e9b-11d9-9669-0800200c9a66

7.2.7 If an implementation claims to support a BSP-controlled database (see 19784-1:2006, A.4.6.1.2), the implementation shall be tested by executing all of the following assertions (in order):

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Table 8 — Assertions for Testing Verification BSP - Database Functions

Number	Assertion name	Package
15a	*BioSPI_DbOpen_ValidParam*	e68ff9a0-e506-11d9-a6a1-0002a5d5c51b
15b	*BioSPI_DbOpen_InvalidBSPHandle*	bfd44400-e5de-11d9-bdb9-0002a5d5c51b
16a	*BioSPI_DbClose_ValidParam*	39aa9560-e5f1-11d9-89f3-0002a5d5c51b
16b	*BioSPI_DbClose_InvalidBSPHandle*	6e3f5c00-e5f3-11d9-b663-0002a5d5c51b
17a	*BioSPI_DbCreate_DbProtected*	7b6c2f40-e650-11d9-812f-0002a5d5c51b
17b	*BioSPI_DbCreate_ValidParam*	1421ec38-1db6-49d4-873d-03e2de17598b
17c	*BioSPI_DbCreate_InvalidBSPHandle*	ef4bb862-79f6-4f01-8f5d-af5c3abf23c0
18a	*BioSPI_DbDelete_InvalidBSPHandle*	678e5d12-3d51-41ec-a672-13f34ea24545
18b	*BioSPI_DbDelete_OpenDbProtected*	9e4d0c6d-4d59-479c-9f58-160ecde99aad
18c	*BioSPI_DbDelete_ValidParam*	499d9cc3-4269-4671-9d69-29a31bc1a08f
19a	*BioSPI_DbSetMarker_ValidParam*	94271080-e723-11d9-898c-0002a5d5c51b
19b	*BioSPI_DbSetMarker_InvalidBSPHandle*	69f7ce20-e72e-11d9-b4e0-0002a5d5c51b
19c	*BioSPI_DbSetMarker_RecordNotFound*	b9c90f40-e7ec-11d9-a435-0002a5d5c51b
20a	*BioSPI_DbFreeMarker_ValidParam*	2e1c9520-e7f1-11d9-a011-0002a5d5c51b
20b	*BioSPI_DbFreeMarker_InvalidBSPHandle*	0f735140-e800-11d9-8a8a-0002a5d5c51b
20c	*BioSPI_DbFreeMarker_InvalidMarker*	a9007b60-e802-11d9-8a5d-0002a5d5c51b
21a	*BioSPI_DbStoreBIR_ValidParam*	da953680-e806-11d9-90d3-0002a5d5c51b
21b	*BioSPI_DbStoreBIR_InvalidBSPHandle*	e39027e0-e80b-11d9-85eb-0002a5d5c51b
22a	*BioSPI_DbGetBIR_ValidParam*	67512700-e811-11d9-a5e0-0002a5d5c51b
22b	*BioSPI_DbGetBIR_InvalidBSPHandle*	f62947e0-e8b7-11d9-9dad-0002a5d5c51b
22c	*BioSPI_DbGetBIR_RecordNotFound*	37457440-e8ba-11d9-87da-0002a5d5c51b
23a	*BioSPI_DbGetNextBIR_ValidParam*	e3396400-e8c9-11d9-990f-0002a5d5c51b
23b	*BioSPI_DbGetNextBIR_InvalidBSPHandle*	f0ef5320-e8d3-11d9-bbc1-0002a5d5c51b

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24a	*BioSPI_DbDeleteBIR_ValidParam*	ed4afbe0-e8d6-11d9-9ed0-0002a5d5c51b
24b	*BioSPI_DbDeleteBIR_InvalidBSPHandle*	72eca940-e8d9-11d9-aa0d-0002a5d5c51b

7.3 Testing BSPs of subclass "Identification BSP"

7.3.1 The following subclauses specify which test assertions shall be used to determine whether a BSP of the conformance subclass "Identification BSP" satisfies the requirements specified in ISO/IEC 19784-1:2006, A.4 and A.4.2

7.3.2 All identification BSPs shall be tested by executing all of the following assertions (in order):

Table 9 — Assertions for Testing Identification BSP

Number	Assertion name	Package
1a	*BioSPI_BSPLoad_InvalidUUID*	020e90c8-0c19-1085-ab54-0002a5d5fd2e
1b	*BioSPI_BSPLoad_ValidParam*	01f6c6f0-0c19-1085-97fe-0002a5d5fd2e
2a	*BioSPI_BSPUnload_ValidParam*	01661010-0c22-1085-8688-0002a5d5fd2e
2b	*BioSPI_BSPUnload_InvalidUUID*	01c2e5b0-0c3b-1085-b31d-0002a5d5fd2e
2c	*BioSPI_BSPUnload_UnmatchedLoad*	02f6c618-0c23-1085-ba89-0002a5d5fd2e
2d	*BioSPI_BSPUnload_Confirm*	03daf040-0c3b-1085-a9fd-0002a5d5fd2e
3a	*BioSPI_BSPAttach_ValidParam*	00ae6488-0c3d-1085-9912-0002a5d5fd2e
3b	*BioSPI_BSPAttach_InvalidUUID*	049cc170-0c5f-1085-981f-0002a5d5fd2e
3c	*BioSPI_BSPAttach_InvalidVersion*	0052ac10-0c60-1085-9883-0002a5d5fd2e
3d	*BioSPI_BSPAttach_InvalidBSPHandle*	03826830-0c57-1085-bfb0-0002a5d5fd2e
4a	*BioSPI_BSPDetach_ValidParam*	00e0d2b0-0c7a-1085-b8ac-0002a5d5fd2e
4b	*BioSPI_BSPDetach_InvalidBSPHandle*	0434c458-0c79-1085-9f2c-0002a5d5fd2e
4c	*BioSPI_BSPDetach_Confirm*	002e7e58-0c78-1085-9e1d-0002a5d5fd2e
5a	*BioSPI_FreeBIRHandle_ValidParam*	0280a7d0-0c80-1085-a9a0-0002a5d5fd2e
5b	*BioSPI_FreeBIRHandle_InvalidBSPHandle*	047aed48-0c80-1085-898b-0002a5d5fd2e
5c	*BioSPI_FreeBIRHandle_InvalidBIRHandle*	018e6c18-0c9c-1085-afdf-0002a5d5fd2e

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6a	*BioSPI_GetBIRFromHandle_ValidParam*	0460b658-0cb4-1085-a304-0002a5d5fd2e
6b	*BioSPI_GetBIRFromHandle_ InvalidBSPHandle*	02445668-0cc5-1085-a3ac-0002a5d5fd2e
6c	*BioSPI_GetBIRFromHandle_ InvalidBIRHandle*	0194a9c0-0cc7-1085-8780-0002a5d5fd2e
7a	*BioSPI_GetHeaderFromHandle_ ValidParam*	027a7db0-0cc7-1085-9391-0002a5d5fd2e
7b	*BioSPI_GetHeaderFromHandle_ InvalidBSPHandle*	057e0d38-0ccd-1085-83b8-0002a5d5fd2e
7c	*BioSPI_GetHeaderFromHandle_ InvalidBIRHandle*	02195e68-0cce-1085-a46f-0002a5d5fd2e
7d	*BioSPI_GetHeaderFromHandle_ BIRHandleNotFreed*	01cc0988-0ccf-1085-a367-0002a5d5fd2e
8a	*BioSPI_EnableEvents_ValidParam*	0333f628-0ccf-1085-aceb-0002a5d5fd2e
8b	*BioSPI_EnableEvents_InvalidBSPHandle*	04ed0838-0ccf-1085-b64e-0002a5d5fd2e
13a	*BioSPI_Enroll_ ValidParam*	0b5ebb60-eefb-11d9-990c-0002a5d5c51b
13b	*BioSPI_Enroll_Payload*	e8969d40-ef05-11d9-9098-0002a5d5c51b
13c	*BioSPI_Enroll_AuditData*	b40a5260-ef14-11d9-a4fe-0002a5d5c51b
13d	*BioSPI_Enroll_BIRHeaderQuality*	6f727320-ef1a-11d9-9143-0002a5d5c51b
14a	*BioSPI_Verify_ ValidParam*	b78e5be0-efcb-11d9-b2c7-0002a5d5c51b
14b	*BioSPI_Verify_Payload*	32969ec0-eff8-11d9-9831-0002a5d5c51b
14c	*BioSPI_Verify_AuditData*	89719700-f218-11d9-b028-0002a5d5c51b

7.3.3 If an implementation claims to support the function *BioSPI_Capture*, the implementation shall be tested by executing all of the following assertions (in order):

Table 10 — Assertions for Testing Identification BSP - BioSPI_Capture

Number	Assertion name	Package
9a	*BioSPI_Capture_AuditData*	02704c50-0cd8-1085-96cb-0002a5d5fd2e
9b	*BioSPI_Capture_ReturnQuality*	03f601f0-0cd8-1085-bd59-0002a5d5fd2e
9c	*BioSPI_Capture_ IntermediateProcessedBIR*	055ddb08-0cd6-1085-a6d3-0002a5d5fd2e
9d	*BioSPI_Capture_InvalidBSPHandle*	0244f2a8-0cf2-1085-8443-0002a5d5fd2e

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7.3.4 If an implementation claims to support the function *BioSPI_CreateTemplate*, the implementation shall be tested by executing all of the following assertions (in order):

Table 11 — Assertions for Testing Identification BSP - BioSPI_CreateTemplate

Number	Assertion name	Package
10a	*BioSPI_CreateTemplate_PayloadSupported*	04a01118-0cf9-1085-96d4-0002a5d5fd2e
10b	*BioSPI_CreateTemplate_ BIRHeaderQuality*	00b5c728-0cfb-1085-8969-0002a5d5fd2e
10c	*BioSPI_CreateTemplate_ OutputBIRDataType*	0193c730-0cf9-1085-b0a3-0002a5d5fd2e
10d	*BioSPI_CreateTemplate_ OutputBIRPurpose*	03dbdaa0-0cf2-1085-99ed-0002a5d5fd2e
10e	*BioSPI_CreateTemplate_ InputBIRDataType*	6d543ea0-2ce9-11d9-9669-0800200c9a66
10f	*BioSPI_CreateTemplate_ Inconsistent_Purpose*	28ec1620-e995-11d9-b1d1-0002a5d5c51b

7.3.5 If an implementation claims to support the function *BioSPI_Process*, the implementation shall be tested by executing all of the following assertions (in order):

Table 12 — Assertions for Testing Identification BSP - BioSPI_Process

Number	Assertion name	Package
11a	*BioSPI_Process_ValidParam*	4ec34700-e9a0-11d9-8fc8-0002a5d5c51b
11b	*BioSPI_Process_BIRHeaderQuality*	211668e0-e9a6-11d9-bcc8-0002a5d5c51b
11c	*BioSPI_Process_OutputBIRPurpose*	e1bb4f20-ed61-11d9-9344-0002a5d5c51b
11d	*BioSPI_Process_BuildsProcessedBIR*	f2ce6540-ed66-11d9-9618-0002a5d5c51b
11e	*BioSPI_Process_InputBIRDataType*	3cf96080-ed6b-11d9-9acf-0002a5d5c51b

7.3.6 If an implementation claims to support the function *BioSPI_VerifyMatch*, the implementation shall be tested by executing all of the following assertions (in order):

Table 13 — Assertions for Testing Identification BSP - BioSPI_VerifyMatch

Number	Assertion name	Package
12a	*BioSPI_VerifyMatch_ValidParam*	688aad60-ee30-11d9-a62c-0002a5d5c51b
12b	*BioSPI_VerifyMatch_Payload*	692ebe20-ee47-11d9-bd34-0002a5d5c51b
12c	*BioSPI_VerifyMatch_ Inconsistent_Purpose*	9108ec70-2e9b-11d9-9669-0800200c9a66

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7.3.7 If an implementation claims to support a BSP-controlled database (see 19784-1:2006, A.4.6.1.2), the implementation shall be tested by executing all of the following assertions (in order):

Table 14 — Assertions for Testing Identification BSP - Database Functions

Number	Assertion name	Package
15a	*BioSPI_DbOpen_ValidParam*	e68ff9a0-e506-11d9-a6a1-0002a5d5c51b
15b	*BioSPI_DbOpen_InvalidBSPHandle*	bfd44400-e5de-11d9-bdb9-0002a5d5c51b
16a	*BioSPI_DbClose_ValidParam*	39aa9560-e5f1-11d9-89f3-0002a5d5c51b
16b	*BioSPI_DbClose_InvalidBSPHandle*	6e3f5c00-e5f3-11d9-b663-0002a5d5c51b
17a	*BioSPI_DbCreate_DbProtected*	7b6c2f40-e650-11d9-812f-0002a5d5c51b
17b	*BioSPI_DbCreate_ValidParam*	1421ec38-1db6-49d4-873d-03e2de17598b
17c	*BioSPI_DbCreate_InvalidBSPHandle*	ef4bb862-79f6-4f01-8f5d-af5c3abf23c0
18a	*BioSPI_DbDelete_InvalidBSPHandle*	678e5d12-3d51-41ec-a672-13f34ea24545
18b	*BioSPI_DbDelete_OpenDbProtected*	9e4d0c6d-4d59-479c-9f58-160ecde99aad
18c	*BioSPI_DbDelete_ValidParam*	499d9cc3-4269-4671-9d69-29a31bc1a08f
19a	*BioSPI_DbSetMarker_ValidParam*	94271080-e723-11d9-898c-0002a5d5c51b
19b	*BioSPI_DbSetMarker_InvalidBSPHandle*	69f7ce20-e72e-11d9-b4e0-0002a5d5c51b
19c	*BioSPI_DbSetMarker_RecordNotFound*	b9c90f40-e7ec-11d9-a435-0002a5d5c51b
20a	*BioSPI_DbFreeMarker_ValidParam*	2e1c9520-e7f1-11d9-a011-0002a5d5c51b
20b	*BioSPI_DbFreeMarker_InvalidBSPHandle*	0f735140-e800-11d9-8a8a-0002a5d5c51b
20c	*BioSPI_DbFreeMarker_InvalidMarker*	a9007b60-e802-11d9-8a5d-0002a5d5c51b
21a	*BioSPI_DbStoreBIR_ValidParam*	da953680-e806-11d9-90d3-0002a5d5c51b
21b	*BioSPI_DbStoreBIR_InvalidBSPHandle*	e39027e0-e80b-11d9-85eb-0002a5d5c51b
22a	*BioSPI_DbGetBIR_ValidParam*	67512700-e811-11d9-a5e0-0002a5d5c51b
22b	*BioSPI_DbGetBIR_InvalidBSPHandle*	f62947e0-e8b7-11d9-9dad-0002a5d5c51b
22c	*BioSPI_DbGetBIR_RecordNotFound*	37457440-e8ba-11d9-87da-0002a5d5c51b

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23a	*BioSPI_DbGetNextBIR_ValidParam*	e3396400-e8c9-11d9-990f-0002a5d5c51b
23b	*BioSPI_DbGetNextBIR_InvalidBSPHandle*	f0ef5320-e8d3-11d9-bbc1-0002a5d5c51b
24a	*BioSPI_DbDeleteBIR_ValidParam*	ed4afbe0-e8d6-11d9-9ed0-0002a5d5c51b
24b	*BioSPI_DbDeleteBIR_InvalidBSPHandle*	72eca940-e8d9-11d9-aa0d-0002a5d5c51b

7.4 Testing BSPs of subclass "Capture BSP"

7.4.1 The following subclauses specify which test assertions shall be used to determine whether a BSP of the conformance subclass "Capture BSP" satisfies the requirements specified in ISO/IEC 19784-1:2006, A.4 and A.4.3.

7.4.2 All BSPs of this subclass shall be tested by executing all of the following assertions (in order):

Table 15 — Assertions for Testing Capture BSP

Number	Assertion name	Package
1a	*BioSPI_BSPLoad_InvalidUUID*	020e90c8-0c19-1085-ab54-0002a5d5fd2e
1b	*BioSPI_BSPLoad_ValidParam*	01f6c6f0-0c19-1085-97fe-0002a5d5fd2e
2a	*BioSPI_BSPUnload_ValidParam*	01661010-0c22-1085-8688-0002a5d5fd2e
2b	*BioSPI_BSPUnload_InvalidUUID*	01c2e5b0-0c3b-1085-b31d-0002a5d5fd2e
2c	*BioSPI_BSPUnload_UnmatchedLoad*	02f6c618-0c23-1085-ba89-0002a5d5fd2e
2d	*BioSPI_BSPUnload_Confirm*	03daf040-0c3b-1085-a9fd-0002a5d5fd2e
3a	*BioSPI_BSPAttach_ValidParam*	00ae6488-0c3d-1085-9912-0002a5d5fd2e
3b	*BioSPI_BSPAttach_InvalidUUID*	049cc170-0c5f-1085-981f-0002a5d5fd2e
3c	*BioSPI_BSPAttach_InvalidVersion*	0052ac10-0c60-1085-9883-0002a5d5fd2e
3d	*BioSPI_BSPAttach_InvalidBSPHandle*	03826830-0c57-1085-bfb0-0002a5d5fd2e
4a	*BioSPI_BSPDetach_ValidParam*	00e0d2b0-0c7a-1085-b8ac-0002a5d5fd2e
4b	*BioSPI_BSPDetach_InvalidBSPHandle*	0434c458-0c79-1085-9f2c-0002a5d5fd2e
4c	*BioSPI_BSPDetach_Confirm*	002e7e58-0c78-1085-9e1d-0002a5d5fd2e

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5a	*BioSPI_FreeBIRHandle_ValidParam*	0280a7d0-0c80-1085-a9a0-0002a5d5fd2e
5b	*BioSPI_FreeBIRHandle_InvalidBSPHandle*	047aed48-0c80-1085-898b-0002a5d5fd2e
5c	*BioSPI_FreeBIRHandle_InvalidBIRHandle*	018e6c18-0c9c-1085-afdf-0002a5d5fd2e
6a	*BioSPI_GetBIRFromHandle_ValidParam*	0460b658-0cb4-1085-a304-0002a5d5fd2e
6b	*BioSPI_GetBIRFromHandle_ InvalidBSPHandle*	02445668-0cc5-1085-a3ac-0002a5d5fd2e
6c	*BioSPI_GetBIRFromHandle_ InvalidBIRHandle*	0194a9c0-0cc7-1085-8780-0002a5d5fd2e
7a	*BioSPI_GetHeaderFromHandle_ ValidParam*	027a7db0-0cc7-1085-9391-0002a5d5fd2e
7b	*BioSPI_GetHeaderFromHandle_ InvalidBSPHandle*	057e0d38-0ccd-1085-83b8-0002a5d5fd2e
7c	*BioSPI_GetHeaderFromHandle_ InvalidBIRHandle*	02195e68-0cce-1085-a46f-0002a5d5fd2e
7d	*BioSPI_GetHeaderFromHandle_ BIRHandleNotFreed*	01cc0988-0ccf-1085-a367-0002a5d5fd2e
8a	*BioSPI_EnableEvents_ValidParam*	0333f628-0ccf-1085-aceb-0002a5d5fd2e
8b	*BioSPI_EnableEvents_InvalidBSPHandle*	04ed0838-0ccf-1085-b64e-0002a5d5fd2e
9a	*BioSPI_Capture_AuditData*	02704c50-0cd8-1085-96cb-0002a5d5fd2e
9b	*BioSPI_Capture_ReturnQuality*	03f601f0-0cd8-1085-bd59-0002a5d5fd2e
9c	*BioSPI_Capture_ IntermediateProcessedBIR*	055ddb08-0cd6-1085-a6d3-0002a5d5fd2e
9d	*BioSPI_Capture_InvalidBSPHandle*	0244f2a8-0cf2-1085-8443-0002a5d5fd2e

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7.4.3 If an implementation claims to support the function *BioSPI_CreateTemplate*, the implementation shall be tested by executing all of the following assertions (in order):

Table 16 — Assertions for Testing Capture BSP - BioSPI_CreateTemplate

Number	Assertion name	Package
10a	*BioSPI_CreateTemplate_PayloadSupported*	04a01118-0cf9-1085-96d4-0002a5d5fd2e
10b	*BioSPI_CreateTemplate_ BIRHeaderQuality*	00b5c728-0cfb-1085-8969-0002a5d5fd2e
10c	*BioSPI_CreateTemplate_ OutputBIRDataType*	0193c730-0cf9-1085-b0a3-0002a5d5fd2e
10d	*BioSPI_CreateTemplate_ OutputBIRPurpose*	03dbdaa0-0cf2-1085-99ed-0002a5d5fd2e
10e	*BioSPI_CreateTemplate_ InputBIRDataType*	6d543ea0-2ce9-11d9-9669-0800200c9a66
10f	*BioSPI_CreateTemplate_ Inconsistent_Purpose*	28ec1620-e995-11d9-b1d1-0002a5d5c51b

7.4.4 If an implementation claims to support the function *BioSPI_Process*, the implementation shall be tested by executing all of the following assertions (in order):

Table 17 — Assertions for Testing Capture BSP - BioSPI_Process

Number	Assertion name	Package
11a	*BioSPI_Process_ValidParam*	4ec34700-e9a0-11d9-8fc8-0002a5d5c51b
11b	*BioSPI_Process_BIRHeaderQuality*	211668e0-e9a6-11d9-bcc8-0002a5d5c51b
11c	*BioSPI_Process_OutputBIRPurpose*	e1bb4f20-ed61-11d9-9344-0002a5d5c51b
11d	*BioSPI_Process_BuildsProcessedBIR*	f2ce6540-ed66-11d9-9618-0002a5d5c51b
11e	*BioSPI_Process_InputBIRDataType*	3cf96080-ed6b-11d9-9acf-0002a5d5c51b

7.4.5 If an implementation claims to support the function *BioSPI_VerifyMatch*, the implementation shall be tested by executing all of the following assertions (in order):

Table 18 — Assertions for Testing Capture BSP - BioSPI_VerifyMatch

Number	Assertion name	Package
12a	*BioSPI_VerifyMatch_ValidParam*	688aad60-ee30-11d9-a62c-0002a5d5c51b
12b	*BioSPI_VerifyMatch_Payload*	692ebe20-ee47-11d9-bd34-0002a5d5c51b
12c	*BioSPI_VerifyMatch_ Inconsistent_Purpose*	9108ec70-2e9b-11d9-9669-0800200c9a66

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7.4.6 If an implementation claims to support the function *BioSPI_Enroll*, the implementation shall be tested by executing all of the following assertions (in order) to verify the claim:

Table 19 — Assertions for Testing Capture BSP - BioSPI_Enroll

Number	Assertion name	Package
13a	*BioSPI_Enroll_ValidParam*	0b5ebb60-eefb-11d9-990c-0002a5d5c51b
13b	*BioSPI_Enroll_Payload*	e8969d40-ef05-11d9-9098-0002a5d5c51b
13c	*BioSPI_Enroll_AuditData*	b40a5260-ef14-11d9-a4fe-0002a5d5c51b
13d	*BioSPI_Enroll_BIRHeaderQuality*	6f727320-ef1a-11d9-9143-0002a5d5c51b

7.4.7 If an implementation claims to support the function *BioSPI_Verify*, the implementation shall be tested by executing all of the following assertions (in order):

Table 20 — Assertions for Testing Capture BSP - BioSPI_Verify

Number	Assertion name	Package
14a	*BioSPI_Verify_ValidParam*	b78e5be0-efcb-11d9-b2c7-0002a5d5c51b
14b	*BioSPI_Verify_Payload*	32969ec0-eff8-11d9-9831-0002a5d5c51b
14c	*BioSPI_Verify_AuditData*	89719700-f218-11d9-b028-0002a5d5c51b

7.4.8 If an implementation claims to support a BSP-controlled database (see 19784-1:2006, A.4.6.1.2), the implementation shall be tested by executing all of the following assertions (in order):

Table 21 — Assertions for Testing Capture BSP - Database Functions

Number	Assertion name	Package
15a	*BioSPI_DbOpen_ValidParam*	e68ff9a0-e506-11d9-a6a1-0002a5d5c51b
15b	*BioSPI_DbOpen_InvalidBSPHandle*	bfd44400-e5de-11d9-bdb9-0002a5d5c51b
16a	*BioSPI_DbClose_ValidParam*	39aa9560-e5f1-11d9-89f3-0002a5d5c51b
16b	*BioSPI_DbClose_InvalidBSPHandle*	6e3f5c00-e5f3-11d9-b663-0002a5d5c51b
17a	*BioSPI_DbCreate_DbProtected*	7b6c2f40-e650-11d9-812f-0002a5d5c51b
17b	*BioSPI_DbCreate_ValidParam*	1421ec38-1db6-49d4-873d-03e2de17598b
17c	*BioSPI_DbCreate_InvalidBSPHandle*	ef4bb862-79f6-4f01-8f5d-af5c3abf23c0

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18a	*BioSPI_DbDelete_InvalidBSPHandle*	678e5d12-3d51-41ec-a672-13f34ea24545
18b	*BioSPI_DbDelete_OpenDbProtected*	9e4d0c6d-4d59-479c-9f58-160ecde99aad
18c	*BioSPI_DbDelete_ValidParam*	499d9cc3-4269-4671-9d69-29a31bc1a08f
19a	*BioSPI_DbSetMarker_ValidParam*	94271080-e723-11d9-898c-0002a5d5c51b
19b	*BioSPI_DbSetMarker_InvalidBSPHandle*	69f7ce20-e72e-11d9-b4e0-0002a5d5c51b
19c	*BioSPI_DbSetMarker_RecordNotFound*	b9c90f40-e7ec-11d9-a435-0002a5d5c51b
20a	*BioSPI_DbFreeMarker_ValidParam*	2e1c9520-e7f1-11d9-a011-0002a5d5c51b
20b	*BioSPI_DbFreeMarker_InvalidBSPHandle*	0f735140-e800-11d9-8a8a-0002a5d5c51b
20c	*BioSPI_DbFreeMarker_InvalidMarker*	a9007b60-e802-11d9-8a5d-0002a5d5c51b
21a	*BioSPI_DbStoreBIR_ValidParam*	da953680-e806-11d9-90d3-0002a5d5c51b
21b	*BioSPI_DbStoreBIR_InvalidBSPHandle*	e39027e0-e80b-11d9-85eb-0002a5d5c51b
22a	*BioSPI_DbGetBIR_ValidParam*	67512700-e811-11d9-a5e0-0002a5d5c51b
22b	*BioSPI_DbGetBIR_InvalidBSPHandle*	f62947e0-e8b7-11d9-9dad-0002a5d5c51b
22c	*BioSPI_DbGetBIR_RecordNotFound*	37457440-e8ba-11d9-87da-0002a5d5c51b
23a	*BioSPI_DbGetNextBIR_ValidParam*	e3396400-e8c9-11d9-990f-0002a5d5c51b
23b	*BioSPI_DbGetNextBIR_InvalidBSPHandle*	f0ef5320-e8d3-11d9-bbc1-0002a5d5c51b
24a	*BioSPI_DbDeleteBIR_ValidParam*	ed4afbe0-e8d6-11d9-9ed0-0002a5d5c51b
24b	*BioSPI_DbDeleteBIR_InvalidBSPHandle*	72eca940-e8d9-11d9-aa0d-0002a5d5c51b

7.5 Testing BSPs of subclass "Verification Engine"

7.5.1 The following subclauses specify which test assertions shall be used to determine whether a BSP of the conformance subclass "Verification Engine" satisfies the requirements specified in ISO/IEC 19784-1:2006, A.4 and A.4.4.

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7.5.2 All BSPs of this subclass shall be tested by executing all of the following assertions (in order):

Table 22 — Assertions for Testing Verification Engine BSP

Number	Assertion name	Package
1a	*BioSPI_BSPLoad_InvalidUUID*	020e90c8-0c19-1085-ab54-0002a5d5fd2e
1b	*BioSPI_BSPLoad_ValidParam*	01f6c6f0-0c19-1085-97fe-0002a5d5fd2e
2a	*BioSPI_BSPUnload_ValidParam*	01661010-0c22-1085-8688-0002a5d5fd2e
2b	*BioSPI_BSPUnload_InvalidUUID*	01c2e5b0-0c3b-1085-b31d-0002a5d5fd2e
2c	*BioSPI_BSPUnload_UnmatchedLoad*	02f6c618-0c23-1085-ba89-0002a5d5fd2e
2d	*BioSPI_BSPUnload_Confirm*	03daf040-0c3b-1085-a9fd-0002a5d5fd2e
3a	*BioSPI_BSPAttach_ValidParam*	00ae6488-0c3d-1085-9912-0002a5d5fd2e
3b	*BioSPI_BSPAttach_InvalidUUID*	049cc170-0c5f-1085-981f-0002a5d5fd2e
3c	*BioSPI_BSPAttach_InvalidVersion*	0052ac10-0c60-1085-9883-0002a5d5fd2e
3d	*BioSPI_BSPAttach_InvalidBSPHandle*	03826830-0c57-1085-bfb0-0002a5d5fd2e
4a	*BioSPI_BSPDetach_ValidParam*	00e0d2b0-0c7a-1085-b8ac-0002a5d5fd2e
4b	*BioSPI_BSPDetach_InvalidBSPHandle*	0434c458-0c79-1085-9f2c-0002a5d5fd2e
4c	*BioSPI_BSPDetach_Confirm*	002e7e58-0c78-1085-9e1d-0002a5d5fd2e
5a	*BioSPI_FreeBIRHandle_ValidParam*	0280a7d0-0c80-1085-a9a0-0002a5d5fd2e
5b	*BioSPI_FreeBIRHandle_InvalidBSPHandle*	047aed48-0c80-1085-898b-0002a5d5fd2e
5c	*BioSPI_FreeBIRHandle_InvalidBIRHandle*	018e6c18-0c9c-1085-afdf-0002a5d5fd2e
6a	*BioSPI_GetBIRFromHandle_ValidParam*	0460b658-0cb4-1085-a304-0002a5d5fd2e
6b	*BioSPI_GetBIRFromHandle_ InvalidBSPHandle*	02445668-0cc5-1085-a3ac-0002a5d5fd2e
6c	*BioSPI_GetBIRFromHandle_ InvalidBIRHandle*	0194a9c0-0cc7-1085-8780-0002a5d5fd2e

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7a	*BioSPI_GetHeaderFromHandle_ ValidParam*	027a7db0-0cc7-1085-9391-0002a5d5fd2e
7b	*BioSPI_GetHeaderFromHandle_ InvalidBSPHandle*	057e0d38-0ccd-1085-83b8-0002a5d5fd2e
7c	*BioSPI_GetHeaderFromHandle_ InvalidBIRHandle*	02195e68-0cce-1085-a46f-0002a5d5fd2e
7d	*BioSPI_GetHeaderFromHandle_ BIRHandleNotFreed*	01cc0988-0ccf-1085-a367-0002a5d5fd2e
8a	*BioSPI_EnableEvents_ValidParam*	0333f628-0ccf-1085-aceb-0002a5d5fd2e
8b	*BioSPI_EnableEvents_InvalidBSPHandle*	04ed0838-0ccf-1085-b64e-0002a5d5fd2e
10a	*BioSPI_CreateTemplate_PayloadSupported*	04a01118-0cf9-1085-96d4-0002a5d5fd2e
10b	*BioSPI_CreateTemplate_ BIRHeaderQuality*	00b5c728-0cfb-1085-8969-0002a5d5fd2e
10c	*BioSPI_CreateTemplate_ OutputBIRDataType*	0193c730-0cf9-1085-b0a3-0002a5d5fd2e
10d	*BioSPI_CreateTemplate_ OutputBIRPurpose*	03dbdaa0-0cf2-1085-99ed-0002a5d5fd2e
10e	*BioSPI_CreateTemplate_ InputBIRDataType*	6d543ea0-2ce9-11d9-9669-0800200c9a66
10f	*BioSPI_CreateTemplate_ Inconsistent_Purpose*	28ec1620-e995-11d9-b1d1-0002a5d5c51b
11a	*BioSPI_Process_ValidParam*	4ec34700-e9a0-11d9-8fc8-0002a5d5c51b
11b	*BioSPI_Process_BIRHeaderQuality*	211668e0-e9a6-11d9-bcc8-0002a5d5c51b
11c	*BioSPI_Process_OutputBIRPurpose*	e1bb4f20-ed61-11d9-9344-0002a5d5c51b
11d	*BioSPI_Process_BuildsProcessedBIR*	f2ce6540-ed66-11d9-9618-0002a5d5c51b
11e	*BioSPI_Process_InputBIRDataType*	3cf96080-ed6b-11d9-9acf-0002a5d5c51b
12a	*BioSPI_VerifyMatch_ValidParam*	688aad60-ee30-11d9-a62c-0002a5d5c51b
12b	*BioSPI_VerifyMatch_Payload*	692ebe20-ee47-11d9-bd34-0002a5d5c51b
12c	*BioSPI_VerifyMatch_ Inconsistent_Purpose*	9108ec70-2e9b-11d9-9669-0800200c9a66

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7.5.3 If an implementation claims to support the function *BioSPI_Capture*, the implementation shall be tested by executing all of the following assertions (in order):

Table 23 — Assertions for Testing Verification Engine BSP - BioSPI_Capture

Number	Assertion name	Package
9a	*BioSPI_Capture_AuditData*	02704c50-0cd8-1085-96cb-0002a5d5fd2e
9b	*BioSPI_Capture_ReturnQuality*	03f601f0-0cd8-1085-bd59-0002a5d5fd2e
9c	*BioSPI_Capture_ IntermediateProcessedBIR*	055ddb08-0cd6-1085-a6d3-0002a5d5fd2e
9d	*BioSPI_Capture_InvalidBSPHandle*	0244f2a8-0cf2-1085-8443-0002a5d5fd2e

7.5.4 If an implementation claims to support the function *BioSPI_Enroll*, the implementation shall be tested by executing all of the following assertions (in order):

Table 24 — Assertions for Testing Verification Engine BSP - BioSPI_Enroll

Number	Assertion name	Package
13a	*BioSPI_Enroll_ValidParam*	0b5ebb60-eefb-11d9-990c-0002a5d5c51b
13b	*BioSPI_Enroll_Payload*	e8969d40-ef05-11d9-9098-0002a5d5c51b
13c	*BioSPI_Enroll_AuditData*	b40a5260-ef14-11d9-a4fe-0002a5d5c51b
13d	*BioSPI_Enroll_BIRHeaderQuality*	6f727320-ef1a-11d9-9143-0002a5d5c51b

7.5.5 If an implementation claims to support the function *BioSPI_Verify*, the implementation shall be tested by executing all of the following assertions (in order):

Table 25 — Assertions for Testing Verification Engine BSP - BioSPI_Verify

Number	Assertion name	Package
14a	*BioSPI_Verify_ValidParam*	b78e5be0-efcb-11d9-b2c7-0002a5d5c51b
14b	*BioSPI_Verify_Payload*	32969ec0-eff8-11d9-9831-0002a5d5c51b
14c	*BioSPI_Verify_AuditData*	89719700-f218-11d9-b028-0002a5d5c51b

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7.5.6 If an implementation claims to support a BSP-controlled database (see 19784-1:2006, A.4.6.1.2), the implementation shall be tested by executing all of the following assertions (in order):

Table 26 — Assertions for Testing Verification Engine BSP - Database Functions

Number	Assertion name	Package
15a	*BioSPI_DbOpen_ValidParam*	e68ff9a0-e506-11d9-a6a1-0002a5d5c51b
15b	*BioSPI_DbOpen_InvalidBSPHandle*	bfd44400-e5de-11d9-bdb9-0002a5d5c51b
16a	*BioSPI_DbClose_ValidParam*	39aa9560-e5f1-11d9-89f3-0002a5d5c51b
16b	*BioSPI_DbClose_InvalidBSPHandle*	6e3f5c00-e5f3-11d9-b663-0002a5d5c51b
17a	*BioSPI_DbCreate_DbProtected*	7b6c2f40-e650-11d9-812f-0002a5d5c51b
17b	*BioSPI_DbCreate_ValidParam*	1421ec38-1db6-49d4-873d-03e2de17598b
17c	*BioSPI_DbCreate_InvalidBSPHandle*	ef4bb862-79f6-4f01-8f5d-af5c3abf23c0
18a	*BioSPI_DbDelete_InvalidBSPHandle*	678e5d12-3d51-41ec-a672-13f34ea24545
18b	*BioSPI_DbDelete_OpenDbProtected*	9e4d0c6d-4d59-479c-9f58-160ecde99aad
18c	*BioSPI_DbDelete_ValidParam*	499d9cc3-4269-4671-9d69-29a31bc1a08f
19a	*BioSPI_DbSetMarker_ValidParam*	94271080-e723-11d9-898c-0002a5d5c51b
19b	*BioSPI_DbSetMarker_InvalidBSPHandle*	69f7ce20-e72e-11d9-b4e0-0002a5d5c51b
19c	*BioSPI_DbSetMarker_RecordNotFound*	b9c90f40-e7ec-11d9-a435-0002a5d5c51b
20a	*BioSPI_DbFreeMarker_ValidParam*	2e1c9520-e7f1-11d9-a011-0002a5d5c51b
20b	*BioSPI_DbFreeMarker_InvalidBSPHandle*	0f735140-e800-11d9-8a8a-0002a5d5c51b
20c	*BioSPI_DbFreeMarker_InvalidMarker*	a9007b60-e802-11d9-8a5d-0002a5d5c51b
21a	*BioSPI_DbStoreBIR_ValidParam*	da953680-e806-11d9-90d3-0002a5d5c51b
21b	*BioSPI_DbStoreBIR_InvalidBSPHandle*	e39027e0-e80b-11d9-85eb-0002a5d5c51b

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22a	*BioSPI_DbGetBIR_ValidParam*	67512700-e811-11d9-a5e0-0002a5d5c51b
22b	*BioSPI_DbGetBIR_InvalidBSPHandle*	f62947e0-e8b7-11d9-9dad-0002a5d5c51b
22c	*BioSPI_DbGetBIR_RecordNotFound*	37457440-e8ba-11d9-87da-0002a5d5c51b
23a	*BioSPI_DbGetNextBIR_ValidParam*	e3396400-e8c9-11d9-990f-0002a5d5c51b
23b	*BioSPI_DbGetNextBIR_InvalidBSPHandle*	f0ef5320-e8d3-11d9-bbc1-0002a5d5c51b
24a	*BioSPI_DbDeleteBIR_ValidParam*	ed4afbe0-e8d6-11d9-9ed0-0002a5d5c51b
24b	*BioSPI_DbDeleteBIR_InvalidBSPHandle*	72eca940-e8d9-11d9-aa0d-0002a5d5c51b

7.6 Testing BSPs of subclass "Identification Engine"

7.6.1 The following subclauses specify which test assertions shall be used to determine whether a BSP of the conformance subclass "Identification Engine" satisfies the requirements specified in ISO/IEC 19784-1:2006, A.4 and A.4.5.

7.6.2 All BSPs of this subclass shall be tested by executing all of the following assertions (in order):

Table 27 — Assertions for Testing Identification Engine BSP

Number	Assertion name	Package
1a	*BioSPI_BSPLoad_InvalidUUID*	020e90c8-0c19-1085-ab54-0002a5d5fd2e
1b	*BioSPI_BSPLoad_ValidParam*	01f6c6f0-0c19-1085-97fe-0002a5d5fd2e
2a	*BioSPI_BSPUnload_ValidParam*	01661010-0c22-1085-8688-0002a5d5fd2e
2b	*BioSPI_BSPUnload_InvalidUUID*	01c2e5b0-0c3b-1085-b31d-0002a5d5fd2e
2c	*BioSPI_BSPUnload_UnmatchedLoad*	02f6c618-0c23-1085-ba89-0002a5d5fd2e
2d	*BioSPI_BSPUnload_Confirm*	03daf040-0c3b-1085-a9fd-0002a5d5fd2e
3a	*BioSPI_BSPAttach_ValidParam*	00ae6488-0c3d-1085-9912-0002a5d5fd2e
3b	*BioSPI_BSPAttach_InvalidUUID*	049cc170-0c5f-1085-981f-0002a5d5fd2e
3c	*BioSPI_BSPAttach_InvalidVersion*	0052ac10-0c60-1085-9883-0002a5d5fd2e
3d	*BioSPI_BSPAttach_InvalidBSPHandle*	03826830-0c57-1085-bfb0-0002a5d5fd2e

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4a	*BioSPI_BSPDetach_ValidParam*	00e0d2b0-0c7a-1085-b8ac-0002a5d5fd2e
4b	*BioSPI_BSPDetach_InvalidBSPHandle*	0434c458-0c79-1085-9f2c-0002a5d5fd2e
4c	*BioSPI_BSPDetach_Confirm*	002e7e58-0c78-1085-9e1d-0002a5d5fd2e
5a	*BioSPI_FreeBIRHandle_ValidParam*	0280a7d0-0c80-1085-a9a0-0002a5d5fd2e
5b	*BioSPI_FreeBIRHandle_InvalidBSPHandle*	047aed48-0c80-1085-898b-0002a5d5fd2e
5c	*BioSPI_FreeBIRHandle_InvalidBIRHandle*	018e6c18-0c9c-1085-afdf-0002a5d5fd2e
6a	*BioSPI_GetBIRFromHandle_ValidParam*	0460b658-0cb4-1085-a304-0002a5d5fd2e
6b	*BioSPI_GetBIRFromHandle_ InvalidBSPHandle*	02445668-0cc5-1085-a3ac-0002a5d5fd2e
6c	*BioSPI_GetBIRFromHandle_ InvalidBIRHandle*	0194a9c0-0cc7-1085-8780-0002a5d5fd2e
7a	*BioSPI_GetHeaderFromHandle_ ValidParam*	027a7db0-0cc7-1085-9391-0002a5d5fd2e
7b	*BioSPI_GetHeaderFromHandle_ InvalidBSPHandle*	057e0d38-0ccd-1085-83b8-0002a5d5fd2e
7c	*BioSPI_GetHeaderFromHandle_ InvalidBIRHandle*	02195e68-0cce-1085-a46f-0002a5d5fd2e
7d	*BioSPI_GetHeaderFromHandle_ BIRHandleNotFreed*	01cc0988-0ccf-1085-a367-0002a5d5fd2e
8a	*BioSPI_EnableEvents_ValidParam*	0333f628-0ccf-1085-aceb-0002a5d5fd2e
8b	*BioSPI_EnableEvents_InvalidBSPHandle*	04ed0838-0ccf-1085-b64e-0002a5d5fd2e

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10a	*BioSPI_CreateTemplate_PayloadSupported*	04a01118-0cf9-1085-96d4-0002a5d5fd2e
10b	*BioSPI_CreateTemplate_ BIRHeaderQuality*	00b5c728-0cfb-1085-8969-0002a5d5fd2e
10c	*BioSPI_CreateTemplate_ OutputBIRDataType*	0193c730-0cf9-1085-b0a3-0002a5d5fd2e
10d	*BioSPI_CreateTemplate_ OutputBIRPurpose*	03dbdaa0-0cf2-1085-99ed-0002a5d5fd2e
10e	*BioSPI_CreateTemplate_ InputBIRDataType*	6d543ea0-2ce9-11d9-9669-0800200c9a66
10f	*BioSPI_CreateTemplate_ Inconsistent_Purpose*	28ec1620-e995-11d9-b1d1-0002a5d5c51b
11a	*BioSPI_Process_ValidParam*	4ec34700-e9a0-11d9-8fc8-0002a5d5c51b
11b	*BioSPI_Process_BIRHeaderQuality*	211668e0-e9a6-11d9-bcc8-0002a5d5c51b
11c	*BioSPI_Process_OutputBIRPurpose*	e1bb4f20-ed61-11d9-9344-0002a5d5c51b
11d	*BioSPI_Process_BuildsProcessedBIR*	f2ce6540-ed66-11d9-9618-0002a5d5c51b
11e	*BioSPI_Process_InputBIRDataType*	3cf96080-ed6b-11d9-9acf-0002a5d5c51b
12a	*BioSPI_VerifyMatch_ValidParam*	688aad60-ee30-11d9-a62c-0002a5d5c51b
12b	*BioSPI_VerifyMatch_Payload*	692ebe20-ee47-11d9-bd34-0002a5d5c51b
12c	*BioSPI_VerifyMatch_ Inconsistent_Purpose*	9108ec70-2e9b-11d9-9669-0800200c9a66

7.6.3 If an implementation claims to support the function *BioSPI_Capture*, the implementation shall be tested by executing all of the following assertions (in order):

Table 28 — Assertions for Testing Identification Engine BSP - BioSPI_Capture

Number	Assertion name	Package
9a	*BioSPI_Capture_AuditData*	02704c50-0cd8-1085-96cb-0002a5d5fd2e
9b	*BioSPI_Capture_ReturnQuality*	03f601f0-0cd8-1085-bd59-0002a5d5fd2e
9c	*BioSPI_Capture_ IntermediateProcessedBIR*	055ddb08-0cd6-1085-a6d3-0002a5d5fd2e
9d	*BioSPI_Capture_InvalidBSPHandle*	0244f2a8-0cf2-1085-8443-0002a5d5fd2e

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7.6.4 If an implementation claims to support the function *BioSPI_Enroll*, the implementation shall be tested by executing all of the following assertions (in order):

Table 29 — Assertions for Testing Identification Engine BSP - BioSPI_Enroll

Number	Assertion name	Package
13a	*BioSPI_Enroll_ValidParam*	0b5ebb60-eefb-11d9-990c-0002a5d5c51b
13b	*BioSPI_Enroll_Payload*	e8969d40-ef05-11d9-9098-0002a5d5c51b
13c	*BioSPI_Enroll_AuditData*	b40a5260-ef14-11d9-a4fe-0002a5d5c51b
13d	*BioSPI_Enroll_BIRHeaderQuality*	6f727320-ef1a-11d9-9143-0002a5d5c51b

7.6.5 If an implementation claims to support the function *BioSPI_Verify*, the implementation shall be tested by executing all of the following assertions (in order):

Table 30 — Assertions for Testing Identification Engine BSP - BioSPI_Verify

Number	Assertion name	Package
14a	*BioSPI_Verify_ValidParam*	b78e5be0-efcb-11d9-b2c7-0002a5d5c51b
14b	*BioSPI_Verify_Payload*	32969ec0-eff8-11d9-9831-0002a5d5c51b
14c	*BioSPI_Verify_AuditData*	89719700-f218-11d9-b028-0002a5d5c51b

7.6.6 If an implementation claims to support a BSP-controlled database (see 19784-1:2006, A.4.6.1.2), the implementation shall be tested by executing all of the following assertions (in order):

Table 31 — Assertions for Testing Identification Engine BSP - Database Functions

Number	Assertion name	Package
15a	*BioSPI_DbOpen_ValidParam*	e68ff9a0-e506-11d9-a6a1-0002a5d5c51b
15b	*BioSPI_DbOpen_InvalidBSPHandle*	bfd44400-e5de-11d9-bdb9-0002a5d5c51b
16a	*BioSPI_DbClose_ValidParam*	39aa9560-e5f1-11d9-89f3-0002a5d5c51b
16b	*BioSPI_DbClose_InvalidBSPHandle*	6e3f5c00-e5f3-11d9-b663-0002a5d5c51b
17a	*BioSPI_DbCreate_DbProtected*	7b6c2f40-e650-11d9-812f-0002a5d5c51b
17b	*BioSPI_DbCreate_ValidParam*	1421ec38-1db6-49d4-873d-03e2de17598b
17c	*BioSPI_DbCreate_InvalidBSPHandle*	ef4bb862-79f6-4f01-8f5d-af5c3abf23c0

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18a	*BioSPI_DbDelete_InvalidBSPHandle*	678e5d12-3d51-41ec-a672-13f34ea24545
18b	*BioSPI_DbDelete_OpenDbProtected*	9e4d0c6d-4d59-479c-9f58-160ecde99aad
18c	*BioSPI_DbDelete_ValidParam*	499d9cc3-4269-4671-9d69-29a31bc1a08f
19a	*BioSPI_DbSetMarker_ValidParam*	94271080-e723-11d9-898c-0002a5d5c51b
19b	*BioSPI_DbSetMarker_InvalidBSPHandle*	69f7ce20-e72e-11d9-b4e0-0002a5d5c51b
19c	*BioSPI_DbSetMarker_RecordNotFound*	b9c90f40-e7ec-11d9-a435-0002a5d5c51b
20a	*BioSPI_DbFreeMarker_ValidParam*	2e1c9520-e7f1-11d9-a011-0002a5d5c51b
20b	*BioSPI_DbFreeMarker_InvalidBSPHandle*	0f735140-e800-11d9-8a8a-0002a5d5c51b
20c	*BioSPI_DbFreeMarker_InvalidMarker*	a9007b60-e802-11d9-8a5d-0002a5d5c51b
21a	*BioSPI_DbStoreBIR_ValidParam*	da953680-e806-11d9-90d3-0002a5d5c51b
21b	*BioSPI_DbStoreBIR_InvalidBSPHandle*	e39027e0-e80b-11d9-85eb-0002a5d5c51b
22a	*BioSPI_DbGetBIR_ValidParam*	67512700-e811-11d9-a5e0-0002a5d5c51b
22b	*BioSPI_DbGetBIR_InvalidBSPHandle*	f62947e0-e8b7-11d9-9dad-0002a5d5c51b
22c	*BioSPI_DbGetBIR_RecordNotFound*	37457440-e8ba-11d9-87da-0002a5d5c51b
23a	*BioSPI_DbGetNextBIR_ValidParam*	e3396400-e8c9-11d9-990f-0002a5d5c51b
23b	*BioSPI_DbGetNextBIR_InvalidBSPHandle*	f0ef5320-e8d3-11d9-bbc1-0002a5d5c51b
24a	*BioSPI_DbDeleteBIR_ValidParam*	ed4afbe0-e8d6-11d9-9ed0-0002a5d5c51b
24b	*BioSPI_DbDeleteBIR_InvalidBSPHandle*	72eca940-e8d9-11d9-aa0d-0002a5d5c51b

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8 Test assertions

8.1 General

8.1.1 This clause 8 specifies all the test assertions relative to BSPs, and includes assertions for BSPs of all conformance subclasses.

8.1.2 A package containing activities that are common to most of the test assertions, is specified in the following subclause 8.2.

8.2 Common activities

The following package contains common activities that are referenced by many test assertions specified in the remainder of this clause.

```
<package name="02c59458-0c46-1085-95d7-0002a5d5fd2e">
      <author>
            ISO/IEC JTC1 SC37
      </author>

      <description>
            This package contains several useful activities that are invoked by activities in other
                              packages.
      </description>

      <activity name="LoadAndAttach">
            <input name="bspUuid"/>
            <input name="bspVersion"/>
            <input name="unitIDOrNull"/>
            <input name="bspHandle"/>
            <input name="eventtimeouttime"/>

            <!-- Initialize the global variable "_unitIDOrNull" to make it available to the activity
                              "EventHandler" -->
            <set name="_unitIDOrNull" var="unitIDOrNull"/>

            <!-- Initialize the global variable "_insert" to "false".  The activity "EventHandler"
                              will set this variable to "true" when a BioAPI_NOTIFY_INSERT event
                              notification is received, and will set it to "false" when a
                              BioAPI_NOTIFY_REMOVE event notification is received. -->
            <set name="_insert" value="false"/>

            <!-- Initialize the "_sourcePresent" global variable to "false".  The activity
                              "EventHandler" will set this variable to "true" when a
                              BioAPI_NOTIFY_SOURCE_PRESENT event notification is received, and will
                              set it to "false" when a BioAPI_NOTIFY_SOURCE_REMOVED event notification
                              is received. -->
            <set name="_sourcePresent" value="false"/>

            <set name="eventtimeoutflag" value="false"/>

            <!-- Invoke the function BioSPI_BSPLoad. -->
            <invoke function="BioSPI_BSPLoad">
                  <input name="BSPUuid" var="bspUuid"/>
                  <input name="BioAPINotifyCallback" value="*"/>
                  <input name="BFPEnumerationHandler" value="*"/>
                  <input name="MemoryFreeHandler" value="*" />
                  <return setvar="return"/>
            </invoke>

            <!-- Issue a conformity response.
                        If the condition specified in the <description> below is false, an UNDECIDED
                              conformity response is issued and the execution of the activity is
                              interrupted, otherwise a PASS conformity response is issued.-->
            <assert_condition response_if_false="undecided"
                        break_if_false="true">
                  <description>
                        The function BioSPI_BSPLoad has returned BioAPI_OK.
                  </description>
                  <equal_to var1="return" var2="__BioAPI_OK"/>
            </assert_condition>
```


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```
        <!-- Wait until the BioAPI_NOTIFY_INSERT event notification has been received, but no
                          longer than the specified maximum duration.-->
        <wait_until timeout_var="eventtimeouttime"
                    setvar="eventtimeoutflag" var="_insert"/>
        <!-- Issue a conformity response.
                    If the condition specified in the <description> below is false, an UNDECIDED
                          conformity response is issued and the execution of the activity is
                          interrupted, otherwise a PASS conformity response is issued.-->
        <assert_condition response_if_false="undecided"
                    break_if_false="true">
              <description>
                    The BioAPI_NOTIFY_INSERT event notification has been received within the
                          specified maximum duration
              </description>
              <not var="eventtimeoutflag"/>
        </assert_condition>

        <!-- Invoke the function BioSPI_BSPAttach. -->
        <invoke function="BioSPI_BSPAttach">
              <input name="BSPUuid" var="bspUuid"/>
              <input name="Version" var="bspVersion"/>
              <input name="Unit_1_UnitCategory" var="_unitCategory" />
              <input name="Unit_1_UnitID" var="_unitID"/>
              <input name="NumUnits" value="1" />
              <input name="BSPHandle" var="bspHandle"/>
              <return setvar="return"/>
        </invoke>

        <!-- Issue a conformity response.
                    If the condition specified in the <description> below is false, an UNDECIDED
                          conformity response is issued and the execution of the activity is
                          interrupted, otherwise a PASS conformity response is issued.-->
        <assert_condition response_if_false="undecided"
                    break_if_false="true">
              <description>
                    The function BioSPI_BSPAttach has returned BioAPI_OK.
              </description>
              <equal_to var1="return" var2="__BioAPI_OK"/>
        </assert_condition>
  </activity>

  <!-- This activity will be invoked on incoming calls to the function BioSPI_ModuleEventHandler
                          exposed by the testing component.  In this activity, the global
                          variables "_unitID", "_insert", "_sourcePresent" and "_eventtype" are
                          set depending on the input parameter values. -->
  <activity name="EventHandler" atomic="true">
        <input name="BSPUuid"/>
        <input name="UnitID"/>
        <input name="UnitSchema_BspUuid" />
        <input name="UnitSchema_UnitManagerUuid" />
        <input name="UnitSchema_UnitId" />
        <input name="UnitSchema_UnitCategory" />
        <input name="UnitSchema_UnitProperties" />
        <input name="UnitSchema_VendorInformation" />
        <input name="UnitSchema_EventNotifyInsert" />
        <input name="UnitSchema_EventNotifyRemove" />
        <input name="UnitSchema_EventNotifyFault" />
        <input name="UnitSchema_EventNotifySourcePresent" />
        <input name="UnitSchema_EventNotifySourceRemoved" />
        <input name="UnitSchema_UnitPropertyID" />
        <input name="UnitSchema_UnitProperty" />
        <input name="UnitSchema_HardwareVersion" />
        <input name="UnitSchema_FirmwareVersion" />
        <input name="UnitSchema_SoftwareVersion" />
        <input name="UnitSchema_HardwareSerialNumber" />
        <input name="UnitSchema_AuthenticatedHardware" />
        <input name="UnitSchema_MaxBspDbSize" />
        <input name="UnitSchema_MaxIdentify" />
        <input name="EventType" />
        <output name="return"/>
```


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```
        <!-- Set the global variable "_unitID" if:
                - it is not set; and
                - the event notification is either BioAPI_NOTIFY_INSERT or
                      BioAPI_NOTIFY_SOURCE_PRESENT; and
                - the event is related to the expected unit, as specified by the parameter
                      "unitIDOrNULL" of the "LoadAndAttach" activity invocation. -->
        <set name="_unitID" var="UnitID">
              <only_if>
                    <not>
                          <existing var="_unitID"/>
                    </not>
                    <or>
                          <equal_to var1="EventType"
                                      var2="__BioAPI_NOTIFY_INSERT"/>
                          <equal_to var1="EventType"
                                      var2="__BioAPI_NOTIFY_SOURCE_PRESENT"/>
                    </or>
                    <or>
                          <equal_to var1="_unitIDOrNull" value2="0"/>
                          <equal_to var1="_unitIDOrNull" var2="UnitID"/>
                    </or>
              </only_if>
        </set>

        <!-- set the unit category -->
        <set name="_unitCategory" var="UnitSchema_UnitCategory">
              <only_if>
                    <not>
                          <existing var="_unitCategory"/>
                    </not>
                    <equal_to var1="EventType"
                                var2="__BioAPI_NOTIFY_INSERT"/>
                    <or>
                          <equal_to var1="_unitIDOrNull" value2="0"/>
                          <equal_to var1="_unitIDOrNull" var2="UnitID"/>
                    </or>
              </only_if>
        </set>

        <invoke activity="EventHandlerSetGlobalData">
              <only_if>
                    <existing var="_unitID"/>
              </only_if>
              <input name="UnitID" var="UnitID"/>
              <input name="EventType" var="EventType"/>
        </invoke>

        <set name="return" var="__BioAPI_OK"/>
  </activity>

  <activity name="EventHandlerSetGlobalData" atomic="true">
        <input name="UnitID"/>
        <input name="EventType"/>

        <!-- Set the global variable "_insert" to "true" if:
                - the event notification is BioAPI_NOTIFY_INSERT; and
                - the event is related to the expected unit, as specified by the parameter
                      "unitIDOrNULL" of the "LoadAndAttach" activity invocation. -->
        <set name="_insert" value="true">
              <only_if>
                    <equal_to var1="EventType" var2="__BioAPI_NOTIFY_INSERT"/>
                    <equal_to var1="_unitID" var2="UnitID"/>
              </only_if>
        </set>

        <!-- Set the global variable "_insert" to "false" if:
                - the event notification is BioAPI_NOTIFY_REMOVE; and
                - the event is related to the expected unit, as specified by the parameter
                      "unitIDOrNULL" of the "LoadAndAttach" activity invocation. -->
        <set name="_insert" value="false">
              <only_if>
                    <equal_to var1="EventType" var2="__BioAPI_NOTIFY_REMOVE"/>
                    <equal_to var1="_unitID" var2="UnitID"/>
              </only_if>
        </set>
```

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```
        <!-- Set the global variable "_sourcePresent" to "true" if:
                    - the event notification is BioAPI_NOTIFY_SOURCE_PRESENT; and
                    - the event is related to the expected unit, as specified by the parameter
                          "unitIDOrNULL" of the "LoadAndAttach" activity invocation. -->
        <set name="_sourcePresent" value="true">
              <only_if>
                    <equal_to var1="EventType"
                                var2="__BioAPI_NOTIFY_SOURCE_PRESENT"/>
                    <equal_to var1="_unitID" var2="UnitID"/>
              </only_if>
        </set>

        <!-- Set the global variable "_sourcePresent" to "false" if:
                    - the event notification is BioAPI_NOTIFY_SOURCE_REMOVED; and
                    - the event is related to the expected unit, as specified by the parameter
                          "unitIDOrNULL" of the "LoadAndAttach" activity invocation. -->
        <set name="_sourcePresent" value="false">
              <only_if>
                    <equal_to var1="EventType"
                                var2="__BioAPI_NOTIFY_SOURCE_REMOVED"/>
                    <equal_to var1="_unitID" var2="UnitID"/>
              </only_if>
        </set>

        <!-- Set the global variable "_eventtype" -->
        <set name="_eventtype" var="EventType">
              <only_if>
                    <equal_to var1="_unitID" var2="UnitID"/>
              </only_if>
        </set>
  </activity>

  <!-- This activity invokes the functions BioSPI_BSPDetach and BioSPI_BSPUnload. -->
  <activity name="DetachAndUnload" >
        <input name="bspUuid"/>
        <input name="BSPHandle"/>

        <!-- Invoke the function BioSPI_BSPDetach.-->
        <invoke function="BioSPI_BSPDetach" >
              <input name="BSPHandle" var="BSPHandle"/>
              <return setvar="return"/>
        </invoke>

        <!-- Issue a conformity response.
                    If the condition specified in the <description> below is false, an UNDECIDED
                          conformity response is issued and the execution of the activity is
                          interrupted, otherwise a PASS conformity response is issued . -->
        <assert_condition response_if_false="undecided"
                    break_if_false="true">
              <description>
                    The function BioSPI_BSPDetach has returned BioAPI_OK.
              </description>
              <equal_to var1="return" var2="__BioAPI_OK"/>
        </assert_condition>

        <!-- Invoke the function BioSPI_BSPUnload.-->
        <invoke function="BioSPI_BSPUnload" >
              <input name="BSPUuid" var="bspUuid" />
              <return setvar="return"/>
        </invoke>

        <!-- Issue a conformity response.
                    If the condition specified in the <description> below is false, an UNDECIDED
                          conformity response is issued, otherwise a PASS conformity response is
                          issued.-->
        <assert_condition response_if_false="undecided"
                    break_if_false="true">
              <description>
                    The function BioSPI_BSPUnload has returned BioAPI_OK.
              </description>
              <equal_to var1="return" var2="__BioAPI_OK"/>
        </assert_condition>
  </activity>
```


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```
<activity name="check_capturedBIR_datatype">
      <input name="BSPHandle" />
      <input name="BIRHandle" />

      <!-- Invoke the function BioSPI_GetHeaderFromHandle on the captured BIR. -->
      <invoke function="BioSPI_GetHeaderFromHandle">
            <input name="BSPHandle" var="BSPHandle"/>
            <input name="Handle" var="BIRHandle"/>
            <output name="ProcessedLevel" setvar="processedLevel"/>
            <return setvar="return"/>
      </invoke>

      <!-- Issue a conformity response.
                  If the condition specified in the <description> below is false, an UNDECIDED
                        conformity response is issued and the execution of the activity is
                        interrupted, otherwise a PASS conformity response is issued.-->
      <assert_condition response_if_false="undecided"
                  break_if_false="true">
            <description>
                        The function BioSPI_GetHeaderFromHandle has returned BioAPI_OK
            </description>
            <equal_to var1="return" var2="__BioAPI_OK"/>
      </assert_condition>

      <!-- Issue a conformity response.
                  If the condition specified in the <description> below is false, an UNDECIDED
                        conformity response is issued and the execution of the activity is
                        interrupted, otherwise a PASS conformity response is issued.-->
      <assert_condition response_if_false="undecided"
                  break_if_false="true">
      <description>
            The processed level of the captured BIR is different from PROCESSED.
      </description>
      <not_equal_to var1="processedLevel"
                  var2="__BioAPI_BIR_DATA_TYPE_PROCESSED" />
      </assert_condition>
</activity>

<activity name="process_bir">
      <input name="BSPHandle" />
      <input name="CapturedBIR_BIRHandle" />

      <!-- Invoke the function BioSPI_Process. -->
      <invoke function="BioSPI_Process">
            <input name="BSPHandle" var="BSPHandle"/>
            <input name="CapturedBIR_Form"
                        var="__BioAPI_BIR_HANDLE_INPUT" />
            <input name="CapturedBIR_BIRHandle"
                        var="CapturedBIR_BIRHandle"/>
            <output name="ProcessedBIR" setvar="_processedbir_handle"/>
            <return setvar="return"/>
      </invoke>

      <!-- Issue a conformity response.
                  If the condition specified in the <description> below is false, an UNDECIDED
                        conformity response is issued, otherwise a PASS conformity response is
                        issued.-->
      <assert_condition response_if_false="undecided"
                  break_if_false="true">
            <description>
                  The function BioSPI_Process has returned BioAPI_OK
            </description>
            <equal_to var1="return" var2="__BioAPI_OK"/>
      </assert_condition>
</activity>


<activity name="payloadSupport_checkPayload" >
      <input name="inputPayload"/>
      <input name="outputPayload"/>
      <input name="result"/>
      <input name="payloadPolicy"/>
      <input name="fmrAchieved"/>
```


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```
        <invoke activity="resultFalse_checkPayload"
                    break_on_break="true">
              <only_if>
                    <same_as var1="result" value2="false"/>
              </only_if>
              <input name="outputPayload"  var="outputPayload" />
        </invoke>

        <invoke activity="resultTrue_checkPayload"
                    break_on_break="true">
              <only_if>
                    <same_as var1="result" value2="true" />
              </only_if>
              <input name="inputPayload" var="inputPayload" />
              <input name="outputPayload" var="outputPayload" />
              <input name="payloadPolicy" var="payloadPolicy" />
              <input name="fmrAchieved" var="fmrAchieved"/>
        </invoke>

  </activity>

  <activity name="payloadNotSupport_checkPayload" >
        <input name="outputPayload"/>

        <!-- Issue a conformity response.
                    If the condition specified in the <description> below is false, a FAIL
                          conformity response is issued and the execution of the activity is
                          interrupted, otherwise a PASS conformity response is issued.-->
        <assert_condition break_if_false="true">
              <description>
                    No payload has been returned.
              </description>
              <same_as var1="outputPayload" value2=""/>
        </assert_condition>

  </activity>

  <activity name="resultFalse_checkPayload" >
        <input name="outputPayload"/>

        <!-- Issue a conformity response.
                    If the condition specified in the <description> below is false, a FAIL
                          conformity response is issued and the execution of the activity is
                          interrupted, otherwise a PASS conformity response is issued.-->
        <assert_condition break_if_false="true">
              <description>
                    The BSP supports payload, the result is false, and no payload has been
                          returned.
              </description>
              <same_as var1="outputPayload" value2=""/>
        </assert_condition>
  </activity>

  <activity name="resultTrue_checkPayload">
        <input name="inputPayload"/>
        <input name="outputPayload"/>
        <input name="payloadPolicy"/>
        <input name="fmrAchieved"/>

        <!-- Issue a conformity response.
                    If the condition specified in the <description> below is false, an UNDECIDED
                          conformity response is issued and the execution of the activity is
                          interrupted, otherwise a PASS conformity response is issued.-->
        <assert_condition response_if_false="undecided"
                    break_if_false="true">
              <description>
                    The returned payload is the same as the provided payload or no payload has
                          been returned because the achieved FMR is too high.
              </description>
              <or>
                    <and>
                          <less_than var1="fmrAchieved" var2="payloadPolicy"/>
                          <same_as var1="outputPayload" var2="inputPayload"/>
                    </and>
                    <and>
                          <greater_than_or_equal_to var1="fmrAchieved" var2="payloadPolicy"/>
```


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```
                        <same_as var1="outputPayload" value2=""/>
                  </and>
            </or>
      </assert_condition>
</activity>

<!-- This activity checks the value of the returned adapted BIR. It is used if the BSP claims
                        to support template adaptation. -->
<activity name="check_adaptation_supported">
      <input name="adaptedbir_handle" />

      <assert_condition response_if_false="undecided"
                  break_if_false="true" >
            <description>
                  The adapted BIR handle has a valid value.
            </description>
            <not_equal_to var1="adaptedbir_handle" value2="-1" />
      </assert_condition>

      <assert_condition break_if_false="true">
            <description>
                  The adapted BIR handle is non-negative.
            </description>
      <greater_than_or_equal_to var1="adaptedbir_handle"
                  value2="0"/>
      </assert_condition>
</activity>

<!-- This activity checks the value of the returned adapted BIR. It is used if the BSP does not
                        claim to support template adaptation. -->
<activity name="check_adaptation_not_supported" >
      <input name="adaptedbir_handle" />

      <assert_condition break_if_false="true">
            <description>
                  Adaptation is not supported by the BSP and the BSP has returned
                        BioAPI_UNSUPPORTED_BIR_HANDLE (-2).
            </description>
            <equal_to var1="adaptedbir_handle" value2="-2" />
      </assert_condition>
</activity>

<!-- This activity checks the value of the returned quality in case processed quality is
                        supported by the BSP. -->
<activity name="check_quality_supported" >
      <input name="quality"/>

      <!-- Issue a conformity response.
                  If the condition specified in the <description> below is false, an UNDECIDED
                        conformity response is issued and the execution of the activity is
                        interrupted, otherwise a PASS conformity response is issued.-->
      <assert_condition response_if_false="undecided"
                  break_if_false="true">
            <description>
                  Quality has a valid value.
            </description>
            <not_equal_to var1="quality" value2="-1"/>
      </assert_condition>

      <!-- Issue a conformity response.
                  If the condition specified in the <description> below is false, a FAIL
                        conformity response is issued and the execution of the activity is
                        interrupted, otherwise a PASS conformity response is issued.-->
      <assert_condition break_if_false="true">
            <description>
                  Quality is supported by the BSP and has a value between 0 and 100.
            </description>
            <greater_than_or_equal_to var1="quality" value2="0"/>
            <less_than_or_equal_to var1="quality" value2="100"/>
      </assert_condition>
</activity>

<!-- This activity checks the value of the returned quality in case processed quality is not
                        supported by the BSP. -->
<activity name="check_quality_not_supported" >
      <input name="quality"/>
```

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```
        <assert_condition break_if_false="true">
              <description>
                    Quality is not  supported by the BSP and -2 is returned.
              </description>
              <equal_to var1="quality" value2="-2"/>
        </assert_condition>
  </activity>

  <!-- This activity create a database -->
  <activity name="PrepareDBTesting" >
        <input name="bspHandle" />
        <input name="dbUuid"/>
        <input name="nosourcepresentsupported" />
        <input name="sourcepresenttimeouttime"/>
        <output name="biruuid"/>

        <invoke function="BioSPI_DbDelete" >
              <input name="BSPHandle" var="bspHandle" />
              <input name="DbUuid" var="dbUuid" />
              <return setvar="return"/>
        </invoke>

        <invoke function="BioSPI_DbCreate">
              <input name="BSPHandle" var="bspHandle"/>
              <input name="DbUuid" var="dbUuid"/>
              <input name="NumberOfRecords" value="1"/>
              <input name="ReadAccessRequest" value="true"/>
              <input name="WriteAccessRequest" value="true"/>
              <output name="DbHandle" setvar="dbHandle"/>
              <return setvar="return"/>
        </invoke>

        <!-- Issue a conformity response.
                    If the condition specified in the <description> below is false, an UNDECIDED
                          conformity response is issued, otherwise a PASS conformity response is
                          issued.-->
        <assert_condition response_if_false="undecided"
                    break_if_false="true">
              <description>
                    The function BioSPI_DbCreate has returned BioAPI_OK
              </description>
              <equal_to var1="return" var2="__BioAPI_OK"/>
        </assert_condition>

        <set name="eventtimeoutflag" value="false"/>

        <!-- If the BSP under test claims support for the BioAPI_NOTIFY_SOURCE_PRESENT event
                          notification, wait until that notification has been received, but no
                          longer than the specified maximum duration.-->
        <wait_until timeout_var="sourcepresenttimeouttime"
                    setvar="eventtimeoutflag">
              <or var1="nosourcepresentsupported" var2="_sourcePresent" />
        </wait_until>

        <!-- Issue a conformity response.
                    If the condition specified in the <description> below is false, an UNDECIDED
                          conformity response is issued and the execution of the activity is
                          interrupted, otherwise a PASS conformity response is issued.-->
        <assert_condition response_if_false="undecided"
                    break_if_false="true">
              <description>
                    Either the BSP under test does not claim support for the
                          BioAPI_NOTIFY_SOURCE_PRESENT event notification, or the event
                          notification has been received within the specified maximum duration.
              </description>
              <not var="eventtimeoutflag"/>
        </assert_condition>

        <!-- The BSP is ready to capture. Invoke the function BioSPI_Enroll for the purpose of
                          enrollment. -->
        <invoke function="BioSPI_Enroll">
              <input name="BSPHandle" var="bspHandle"/>
              <input name="Purpose"
                          var="__BioAPI_PURPOSE_ENROLL_FOR_VERIFICATION_ONLY"/>
              <input name="Timeout" value="15000"/>
```


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```
            <output name="NewTemplate" setvar="newtemplate_handle"/>
            <return setvar="return"/>
      </invoke>

      <!-- Issue a conformity response.
                  If the condition specified in the <description> below is false, an UNDECIDED
                        conformity response is issued and the execution of the activity is
                        interrupted, otherwise a PASS conformity response is issued.-->
      <assert_condition response_if_false="undecided"
                  break_if_false="true">
            <description>
                  The function BioSPI_Enroll has returned BioAPI_OK
            </description>
            <equal_to var1="return" var2="__BioAPI_OK"/>
      </assert_condition>

      <!-- Invoke the function BioSPI_DbStoreBIR to store the enrolled BIR into database -->
      <invoke function="BioSPI_DbStoreBIR">
            <input name="BSPHandle" var="bspHandle"/>
            <input name="BIRToStore_Form" var="__BioAPI_BIR_HANDLE_INPUT"/>
            <input name="BIRToStore_BIRHandle" var="newtemplate_handle"/>
            <input name="DbHandle" var="dbHandle"/>
            <input name="no_BirUuid" value="false"/>
            <output name="BirUuid" setvar="biruuid"/>
            <return setvar="return"/>
      </invoke>

      <!-- Issue a conformity response.
                  If the condition specified in the <description> below is false, a FAIL
                        conformity response is issued, otherwise a PASS conformity response is
                        issued.-->
      <assert_condition response_if_false="undecided"
                  break_if_false="true">
            <description>
                  The function BioSPI_DbStoreBIR has returned BioAPI_OK, and the output UUID is
                        not NULL.
            </description>
            <equal_to var1="return" var2="__BioAPI_OK"/>
            <not_same_as var1="biruuid" value2=""/>
      </assert_condition>

      <!-- Invoke the function BioSPI_DbClose with valid input parameters -->
      <invoke function="BioSPI_DbClose">
            <input name="BSPHandle" var="bspHandle"/>
            <input name="DbHandle" var="dbHandle"/>
            <return setvar="return"/>
      </invoke>

      <!-- Issue a conformity response.
                  If the condition specified in the <description> below is false, an UNDECIDED
                        conformity response is issued, otherwise a PASS conformity response is
                        issued.-->
      <assert_condition response_if_false="undecided"
                  break_if_false="true">
            <description>
                  The function BioSPI_DbClose has returned BioAPI_OK
            </description>
            <equal_to var1="return" var2="__BioAPI_OK"/>
      </assert_condition>
</activity>

<!-- This activity  delete a database -->
<activity name="CleanUpDBTesting" >
      <input name="BSPHandle" />
      <input name="dbUuid"/>

      <!-- Invoke the function BioSPI_DbDelete valid parameters -->
      <invoke function="BioSPI_DbDelete">
            <input name="BSPHandle" var="_bsphandle"/>
            <input name="DbUuid" var="dbUuid"/>
            <return setvar="return"/>
      </invoke>
```


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```
            <!-- Issue a conformity response.
                        If the condition specified in the <description> below is false, an UNDECIDED
                              conformity response is issued, otherwise a PASS conformity response is
                              issued.-->
            <assert_condition response_if_false="undecided">
                  <description>
                        The function BioSPI_DbDelete has returned BioAPI_OK
                  </description>
                  <equal_to var1="return" var2="__BioAPI_OK"/>
            </assert_condition>

      </activity>
</package>
```

8.3 Assertion 1a - *BioSPI_BSPLoad_InvalidUUID*

Description: This assertion checks if calling the function BioSPI_BSPLoad with an invalid input parameter UUID returns BioAPIERR_H_FRAMEWORK_INVALID_UUID.

Excerpts:

Subclause 9.3.1.1

*BioAPI_RETURN BioAPI BioSPI_BSPLoad(const BioAPI_UUID *BSPUuid,*
BioSPI_EventHandler BioAPINotifyCallback,
BioSPI_BFP_ENUMERATION_HANDLER BFPEnumerationHandler,
BioSPI_MEMORY_FREE_HANDLER MemoryFreeHandler);

This function completes the module initialization process between BioAPI and the biometric service module.

Return Value

A BioAPI_RETURN value indicating success or specifying a particular error condition. The value BioAPI_OK indicates success. All other values represent an error condition.
The BSPUuid identifies the invoked module.

Subclause 11.2.3

Errors: BioAPIERR_INVALID_UUID

References: 9.3.1.1 and 11.2.3

Scenario:

1) Call BioSPI_BSPLoad with an invalid input parameter UUID.

2) Check the return value. If it is BioAPIERR_INVALID_UUID, then issue a PASS conformity response, otherwise issue a FAIL conformity response.

If any of the intermediate operations fails, an UNDECIDED conformity response is issued.

Expected results: The call to BioSPI_BSPLoad returns BioAPIERR_INVALID_UUID.

Assertion language package

```
<package name="020e90c8-0c19-1085-ab54-0002a5d5fd2e">
      <author>
            ISO/IEC JTC1 SC37
      </author>

      <description>
            This package contains the assertion "BioSPI_BSPLoad_InvalidUUID" (see the "description"
                              element of the assertion below).
      </description>
```


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